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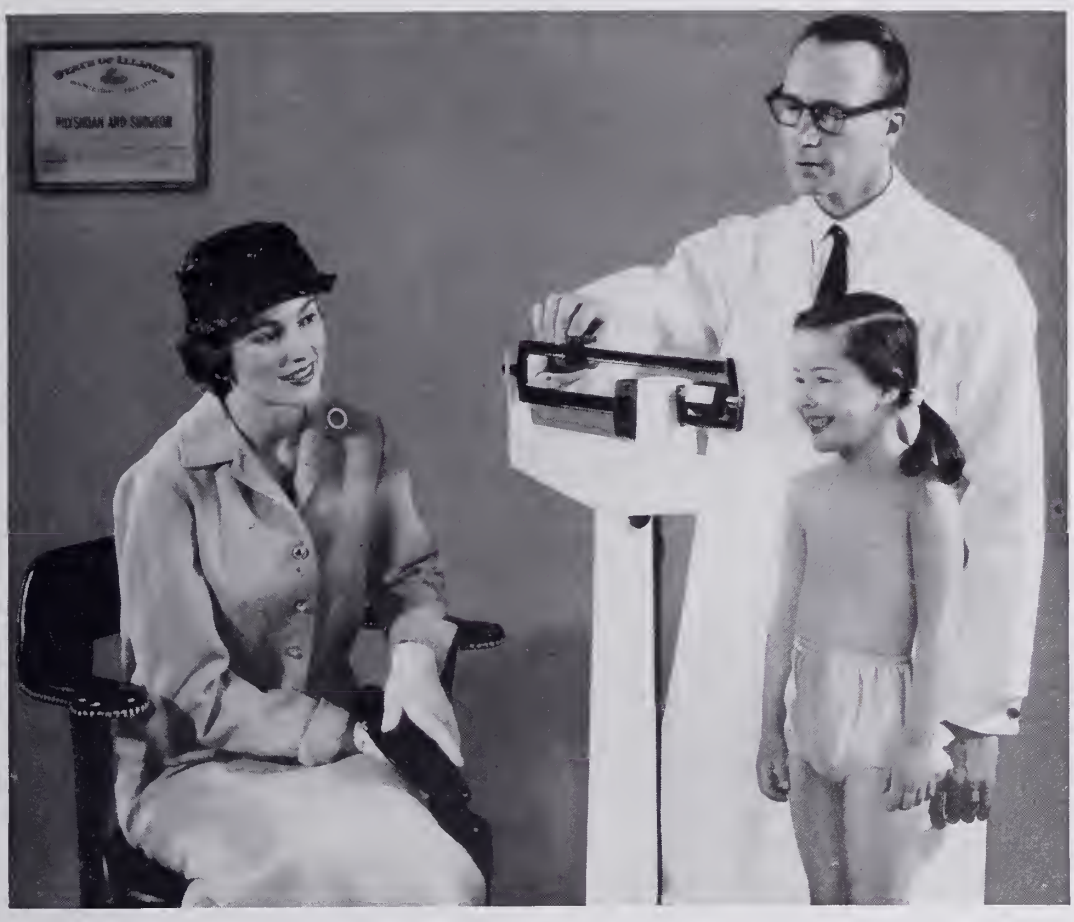
Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

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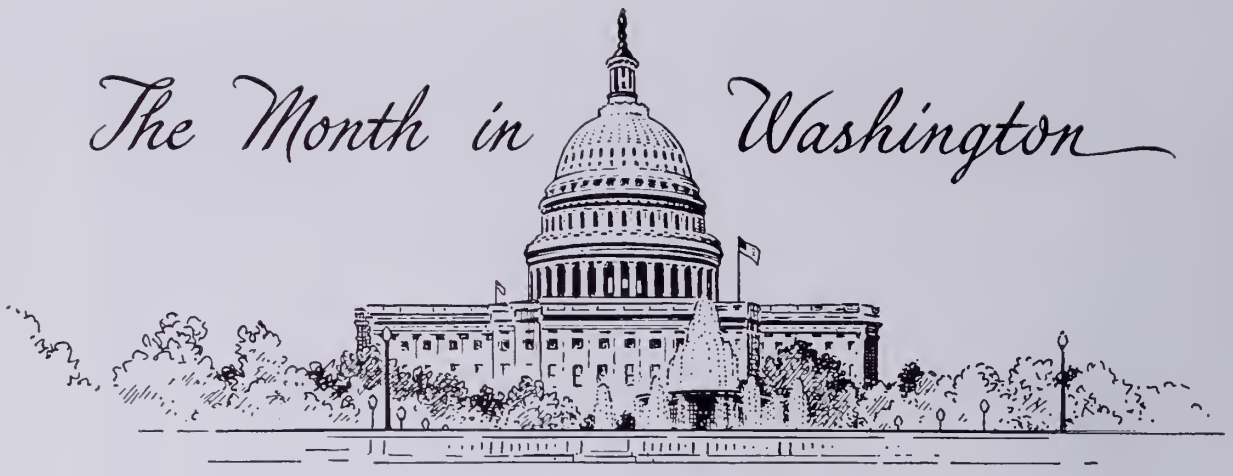
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*Brown, S. S.; Libo, H. W., and Nussboum, A. H.: Norethandrolone in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

The Month in Washington



Washington, D. C.—Congress is about to embark on a crucial election year session, with expansion of the Social Security program shaping up as one of the major issues.

It has been virtually a foregone conclusion that some liberalization of the program would be voted in the Democratic-controlled Congress, but the key question is how far the changes will go. In every presidential election year during the recent past, the House and Senate have approved a broadening of the program.

One of the prime reasons why Social Security has been an election year "favorite" is that the program can be boosted without affecting the federal budget, for it is financed through employer-employee contributions and is theoretically self-supporting.

Of special interest to physicians, of course, is the fate of the so-called Forand Bill that would provide hospitalization, surgical services and nursing-home care for Social Security beneficiaries through even higher taxes on employees and employers than have already been scheduled through already-voted step increases.

Supporters of the controversial legislation—vigorously opposed by the Administration, the American Medical Association, and allied organizations—launched their move to win enactment this session.

Sen. Pat McNamara (D., Mich.), whose Senate Subcommittee on Aging held a series of hearings across the country during the recess, announced at the conclusion of the hearings that they showed a need for expanding Social Security to include health care for the aged. He indicated that he thought the Forand Bill did not go far enough.

Here, a battery of speakers at a meeting of the American Public Welfare Association also urged a sharp increase in benefits, with some advocating "cradle to grave" security for all.

Not all of the proposals for extending the program involved health care.

The Administration indicated it would recommend some expansion, especially in the disability program under which the federal government helps the states provide assistance to persons over age 50 who have been judged to be totally and permanently disabled. An influential lawmaker, Rep. Burr Harrison (D., Va.), disclosed that he would introduce legislation to remove the age-50 limitation to allow all persons regardless of age to participate. He estimated this would not require any hiking of the taxes. Rep. Harrison is chairman of a House Ways and Means Subcommittee that held recess hearings on administration of the disability program.

Meanwhile, Chairman Wilbur Mills (D., Ark.), of the full Ways and Means Committee, cleared the way for full-scale hearings this Congressional session on the entire issue of Social Security. In listing specific phases to be considered, however, the lawmaker did not mention the Forand proposal.

* * *

A spokesman for the American Medical Association told the Federal Communications Commission that the AMA believes the best solution to objectionable advertising and programs on television and radio is for the industry "to clean its own house."

Dr. Eugene F. Hoffman, co-chairman of the AMA's Physician's Advisory Committee on Television, Radio and Motion Pictures, declared, "The medical profession . . . stands ready to assist the networks and individual stations in determining accuracy and good taste of broadcast material involving health or medicine—either commercial or public service."

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Personals



The first Iowa workshop for medical assistants was held November 9 through 13 at the State University of Iowa. The week-long training period was attended by twenty-six medical aides who came from all parts of Iowa. Participants of the workshop attended classes and lectures given by the following SUI faculty members: **Mr. W. R. Hudson**, a professor of mechanical engineering; **Mr. Norman Kallaus,** assistant professor of office management and business education; **Miss Edith Ennis,** a research associate in the Bureau of Business and Economic Research and instructor in office management and business education, and **Mr. Gilbert Moore**, an assistant professor of education.

Two hundred pre-medical students and advisors from 26 colleges in Iowa, Illinois and Minnesota attended the 11th annual pre-medical conference at the State University of Iowa's College of Medicine on November 13. The conference was designed specifically to provide information about the SUI College of Medicine and to discuss problems of interest to the pre-medical student. **Dr. Norman B. Nelson,** dean of the College of Medicine, gave the welcoming address. **Dr. Walter S. Wiggins,** executive secretary of the American Medical Association's Council on Medical Education, and **Dr. Raymond G. Bunge,** professor of urology at SUI, spoke on "Important Factors to Consider in Preparation for a Medical Education and Practice." Other features of the conference were talks by senior medical students directed to the pre-medical students, showing of the film "I Am a Doctor," a talk by **Dr. Elmer L. DeGowin** of SUI and a tour of the University Hospitals and medical laboratories.

Dr. William Spencer, a surgeon at Osage, was elected chief of staff of the Mitchell County Memorial Hospital at a recent meeting of the hospital staff. Dr. Spencer succeeds **Dr. William E. Owen,** of St. Ansgar, who has held the position for the past two years.

Four doctors of the Jennie Edmundson Hospital staff, Council Bluffs, recently won a blue ribbon for their exhibit at the Omaha-Mid West Clinical meeting held at the Omaha Auditorium early in November. The doctors whose entry won top honors over 29 others were **Drs. Patrick S. Peartree, William W. Jurgansen,** and **Raymand G. McDonald,**

Doctor . .

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all of Omaha, and **Dr. Maurice Margules**, of Council Bluffs. Their winning display illustrated the ejection of a dye into the brain, making the artery visible on x-ray. Entries were judged by visiting physicians.

The Sixty-fourth Annual Meeting of the Sioux Valley Medical Association will be held at the Sheraton-Martin Hotel, in Sioux City, February 23, 24 and 25, 1960. The sessions are to be sponsored by the School of Medicine of the University of South Dakota, and will be fully accredited by the American Academy of General Practice. **Dr. Joe Krigsten** is currently president of the Association, **Dr. E. H. Sibley** is secretary, and **Dr. Harold Jones** is program chairman. All three practice in Sioux City.

As in former years, the first of the three meeting days will begin with clinics at the Sioux City hospitals, for which **Dr. Max Wainwright**, of Sioux City, is making the plans, and will conclude with a smoker. There will be a banquet on the second (Wednesday) evening, and doctors' wives are encouraged to come for that event and for the other entertainment that is being planned for them by the Auxiliary to the Woodbury County Medical Society.

A list of speakers and their topics will be published in the February issue of this JOURNAL.

Dr. Michael Bonfiglio, associate professor in the Department of Orthopedic Surgery at S.U.I., has been named a fellow of The New York Academy of Sciences. Election to fellowship in the Academy is conferred upon "a limited number of members who, in the estimation of the Academy's scientific council, have done outstanding work toward the advancement of science."

Dr. William B. Bean, professor and head of the Department of Internal Medicine at the S.U.I. College of Medicine, has been appointed consultant for a survey of medical research in Veterans Administration hospitals. The survey is under the auspices of the Division of Medical Sciences of the National Academy of Sciences, Washington, D. C.

At the December 8 meeting of the Dubuque County Medical Society, **Dr. D. C. Sharpe**, of Dubuque, was elected president, succeeding **Dr. Kenneth K. Hazlet** in that office. Other officers elected were **Drs. Robert J. McNamara**, Dubuque, first vice-president; **C. C. Griffin**, Dyersville, second vice-president; **Frederick Fuerste, Jr.**, Dubuque, secretary, and **David Howell,** Dubuque, treasurer.

After 30 years of private practice in Glenwood, **Dr. Dean W. Harman** closed his office to become

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a full-time member of the professional staff of the Glenwood State School, effective January 1. For the past five years Dr. Harman has served the School on a part-time basis.

The Commercial Club of Farmington is planning a medical center in honor of the late **Dr. L. A. Coffin,** who was ISMS and AMA General Practitioner of the Year in 1958.

Dr. A. J. Schroeder, of Marshalltown, was elected president of the Mercy Hospital staff there on Tuesday evening, December 8. He succeeds **Dr. Harris Heise** in the post. Other officers elected were **Drs. Milo Jeffries,** Marshalltown, vice-president, and **Henry Kosieradzki,** Marshalltown, secretary-treasurer. The board members named were **Drs. W. W. Southwick** and **R. C. Carpenter,** both of Marshalltown.

The Black Hawk County Medical Society will hold its January meeting at the Elks Club in Waterloo, on the 19th at 6:30 p.m. **Dr. Malcolm A. McCannel** of Minneapolis will speak on "Ophthalmology in General Practice."

Two new members of the psychology staff at Glenwood State School are **Mr. James Woo-Sam** and **Mr. Alexander Biron.** Mr. Woo-Sam, who is originally from British Guiana, did his undergraduate work at Illinois Institute of Technology and his graduate work at Purdue University. He expects to be awarded his Ph.D. shortly. Mr. Biron is a native Canadian and a graduate of the School of Psychology and Education of Ottawa University.

Dr. John R. Carter, professor of pathology at the S.U.I. College of Medicine, has resigned effective December 31, 1959, to accept the position of professor and head of the Department of Pathology at the University of Kansas School of Medicine. Dr. Carter has been at S.U.I. since 1944, with the exception of a tour of duty with the U. S. Navy. After returning from the Navy, he became an assistant professor of pathology in 1948, and rose to the rank of full professor in 1955.

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Femoral Arteriography, Four Days, January 5
Proctoscopy & Sigmoidoscopy, One Week, February 1
Head, Neck & Plastic Surgery, One Week, March 7
Colon Surgery, One Week, March 7
Blood Vessel Surgery, One Week, March 14
Fractures & Traumatic Surgery, Two Weeks, March 21

GYNECOLOGY & OBSTETRICS—Vaginal Approach to Pelvic Surgery, One Week, February 1
General & Surgical Obstetrics, Two Weeks, February 8
Office & Operative Gynecology, Two Weeks, February 22

MEDICINE—Gastroscopy & Gastroenterology, Two Weeks, April 18
Advancements in Internal Medicine, One Week, March 28
Two-Week Intensive Course, May 2
Basic Electrocardiography, Two Weeks, May 16

UROLOGY—Two-Week Intensive Course, April 4
Cystoscopy, Two Weeks, by appointment

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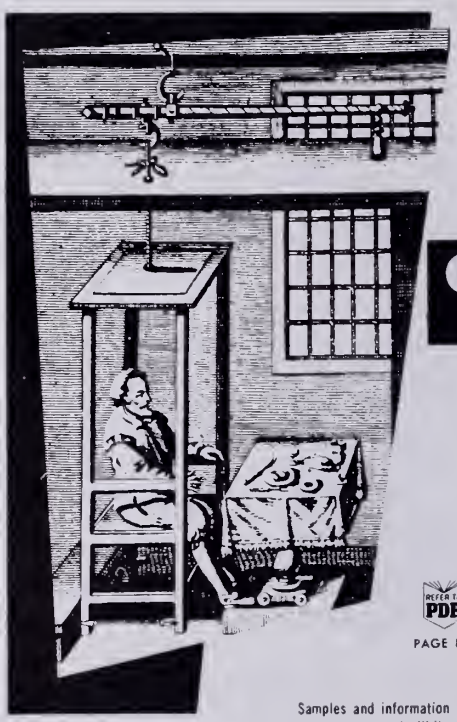
Dr. Gian Tondury, professor of anatomy at the University of Zurich, spoke on December 14 at the State University of Iowa's College of Medicine. The speech, one in the current series of College of Medicine Lectures, dealt with the effect of various viruses upon the development of the human embryo.

Dr. James S. Calnan, chief of Oxford University's cleft palate clinic, lectured before the staff of the Department of Otolaryngology of the S.U.I. College of Medicine, on December 12.

The Delaware County Medical Society sponsored a drive from Nov. 15-21, to encourage Delaware County residents to take advantage of a simple diabetes test performed without charge by local participating physicians. In publicizing the drive, the Society emphasized that diabetes is dangerous if neglected but that diabetes discovered in the early stages can almost always be brought under control.

Dr. Thomas Courtney Wilson, of Muscatine, who practiced medicine at Havana, Cuba, for a number of years, spoke on the Cuban situation at the Moline Rotary Club luncheon Monday, November 2. Dr. and Mrs. Wilson returned to Muscatine earlier this year, following the revolution which established the regime of **Prime Minister Fidel Castro.**

The SUI College of Medicine was host to more than 200 doctors from Iowa and neighboring states who attended the Mid-Western Cardiac Conference there November 19-21. The conference, one of the 1959-1960 series of medical postgraduate courses conducted by the College of Medicine, was sponsored by the Iowa Heart Association, the State Department of Health's Division of Gerontology, Heart and Chronic Diseases, the Departments of Internal Medicine and Surgery at SUI, and the Iowa Clinical Medical Society. The meeting was one of the professional education activities supported by the Iowa Heart Fund. Doctors attending the conference heard reports on many of the newer developments in the control of heart disease by researchers who are nationally prominent in the field. The program included scientific papers and panel discussions by 25 members of the medical staff at SUI and by the following visiting specialists: **Drs. Frederic C. Bartter,** chief of the Section on Clinical Endocrinology, National Heart Insti-



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tute; **Raymond W. Gifford, Jr.**, consultant, Mayo Clinic Section of Medicine; **C. Walton Lillehei**, professor of surgery at the University of Minnesota Medical School; **Victor A. McKusick**, associate professor of medicine at Johns Hopkins Hospital; and **John H. Moyer**, chairman of the Department of Internal Medicine at Hahnemann Medical College and Hospital. The presiding officers at the sessions included **Dr. Walter L. Bierring**, director of the State Health Department's Division of Gerontology, Heart and Chronic Diseases, **Dr. L. W. Swanson**, Mason City, president of the Iowa Heart Association, and **Dr. George Montgomery**, Ames, president of the Iowa Clinical Medicine Society.

Dr. Harold L. Brenton, who for the last five years has practiced internal medicine at Columbia City, Indiana, joined the staff of the Park Clinic, Mason City, on December 1. He served his internship and residency at the SUI College of Medicine, and is a member of Alpha Omega Alpha honor medical society, the American Board of Internal Medicine and the American Society of Internal Medicine and is an associate member of the American College of Physicians. Dr. Brenton's parents live in Charles City.

Dr. Charles A. Field, of Cresco, has accepted a fellowship in obstetrics and gynecology at the Mayo Clinic. Dr. Field officially joined the staff of the Clinic, January 1. In the nine years that Dr. Field has practiced at Cresco he has been associated with the late **Dr. W. A. Bockoven** and more recently with **Drs. Paul A. Nierling, Donald Maland** and **Willis K. Dankle**, his associates at the Cresco Medical Arts Center.

Dr. Egbert H. Fell, clinical professor of surgery at the University of Illinois College of Medicine and an attending surgeon at Presbyterian-St. Luke's Hospital, in Chicago, will be the guest speaker at the Scott County Medical Society meeting, Tuesday, January 5. Dr. Fell will present a paper on "Surgery of Acquired Heart Disease."

Dr. C. P. Gopelrud, assistant professor of obstetrics and gynecology at the SUI College of Medicine, will be guest speaker at the Muscatine County Medical Society meeting on January 8. His topic is to be "Improving Fetal Salvage."

Dr. Carl V. Griesy, who practiced at Rock Valley for the past two years, announced the transfer of his practice to Rock Rapids effective December 1, 1959. Dr. Griesy, a native of Belmond, is a gradu-




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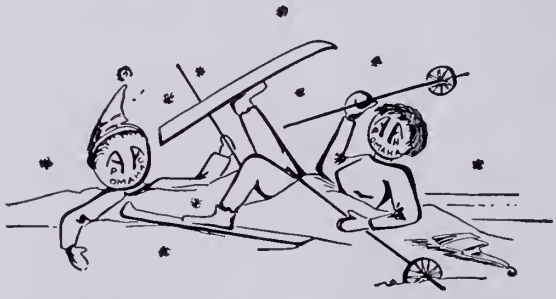
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ate of the SUI College of Medicine and interned at Broadlawns Hospital, Des Moines.

The names of Selective Service personnel slated to receive length-of-service awards have been announced by **Colonel Glenn R. Bowles**, state director of Selective Service for Iowa. Awards are in the form of certificates given for each five years of service with the system. **Dr. F. G. Sarff**, of Logan, medical adviser for the Harrison County local board, was designated to receive the Fifteen Year Certificate.

In addressing the Linn County Medical Society on November 13, **Dr. Ian Maclean Smith**, of the University Hospitals Department of Internal Medicine, warned doctors not to bar antibiotics where they are definitely indicated, but to be sure to give the right one. He explained that the use of antibiotics where they are not required may upset the natural balance between man and his parasites, and may also produce infection. Dr. Smith also alerted his listeners to the possibility of two infections occurring simultaneously, making them difficult to identify. He offered strep throat as an example of a bacterial disease that has associated with it a danger of rheumatic fever. Sore throats, he warned, should not be treated with antibiotics until a culture has been made to determine the nature of the infection.

At the end of its first year of publication, the editors of the AMERICAN MEDICAL ASSOCIATION NEWS report evidence of a quite unexpected general interest in medical news. Although the NEWS is published primarily for the medical profession, articles from it were widely quoted and reprinted in many non-medical publications both here and abroad. Editors of the NEWS are convinced that the medical profession has underestimated the deep concern of the general public with keeping abreast of new developments in medicine.

More than 30 physicians from all parts of Iowa attended a postgraduate seminar in otolaryngology, November 18, at the SUI College of Medicine. Speakers on the program from the SUI Department of Otolaryngology were **Drs. Clair M. Kos, John B. Gregg** and several resident physicians. Registrants, all specialists in the field of otolaryngology, heard presentations on infectious diseases of the head, face, ears, and nose, on the

"use and abuse" of antibiotics, and the plastic repair of lesions about the head.

Despite cold weather and hazardous roads, nearly 150 people from surrounding towns attended the open house at **Dr. E. G. Nafziger**'s new clinic in Battle Creek on November 14. The clinic, built by the doctor with the financial aid of two Battle Creek families, is the culmination of a four-year effort on the part of the local residents to supply themselves with adequate medical care facilities.

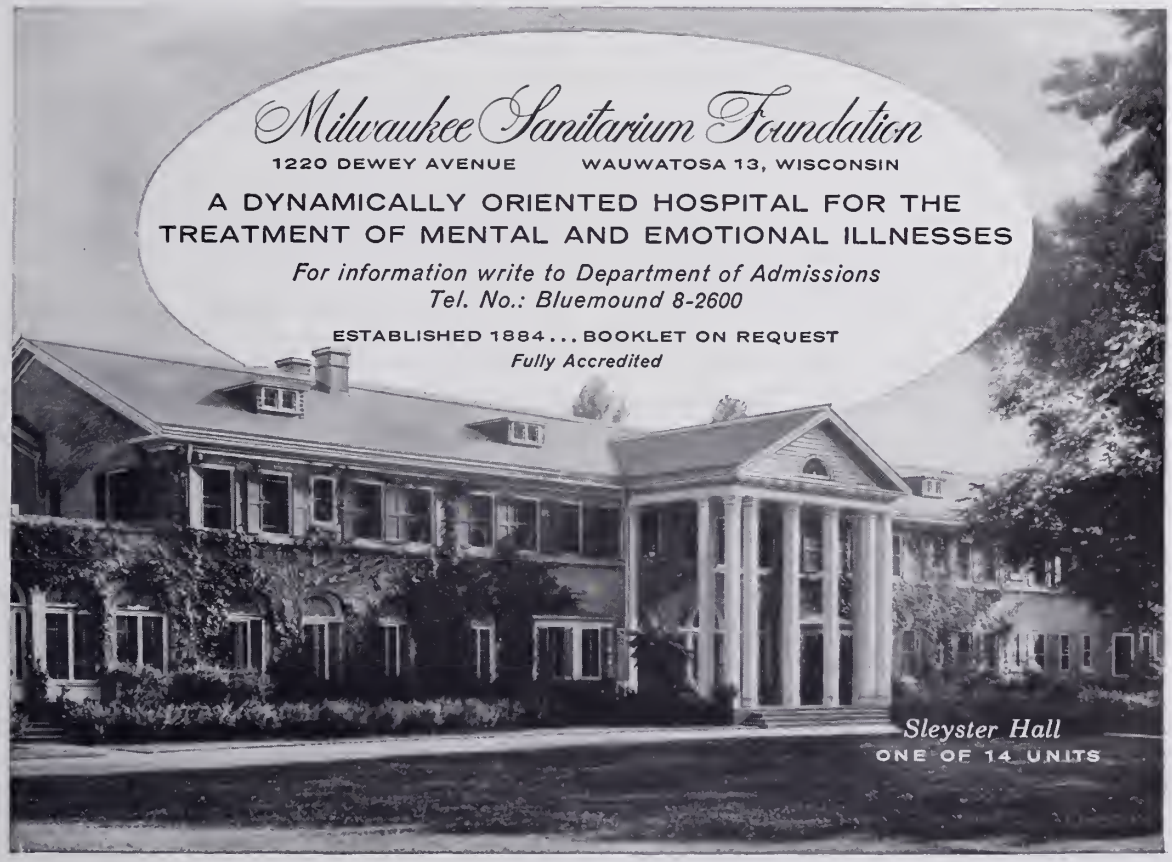
The New Spirit Lake Medical Center opened its doors to the public Sunday, November 15. The Medical Center Building is the former Marcus Snyder Memorial Hospital which closed last June 15 after 19 years of continuous service to the community. Extensive remodelling began immediately to transform the 45-year-old building into more modern and efficient quarters. Its occupants include **Drs. Donald F. Rodawig, Sr.** and **Jr., Dr. Phil A. Scott, Dr. Eugene L. Johnson** and **Dr. Ralph E. Reeds.**

The role of the medical witness in courtroom trials was the subject of discussion at a law convocation held in Shambaugh Auditorium, Iowa City, November 23. Sponsored by the College of Law and the Iowa Law Students Association, the convocation was concerned with the relation between the trial and the expert medical witness, and the testimony of such a witness. Guest speakers were **Mr. David Elderkin,** a trial attorney from Cedar Rapids, and **Dr. Carroll B. Larson,** professor and head of orthopedic surgery at University Hospitals. The convocation was the second of six designed to give law students insight into legal practice and corporate work.

The appointment of **Dr. William C. Keettel** as head of the Department of Obstetrics and Gynecology at the University of Iowa College of Medicine has been approved by the Iowa Board of Regents. Dr. Keettel has served as acting head of the Department since the death of **Dr. John H. Randall,** last April.

Dr. H. J. Heusinkveld of Clinton, announced his retirement from medical practice effective December 1, 1959. This decision terminates a medical career spanning almost half a century.

At an Ottumwa Rotary Club luncheon meeting November 23, **Dr. E. B. Howell** was honored for his



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50 years of medical practice in Ottumwa. Dr. Howell graduated and took his residency at the State University of Iowa, and during the past 32 years has devoted most of his practice to surgery. He has served two terms as vice-president of the Iowa State Medical Society, and was a member of its executive committee for seven years. He also has been president of both the Des Moines Valley Medical Association and the Wapello County Medical Society, is a life member of the American College of Surgeons and has been chief of staff of both local hospitals.

Early in December, **Dr. Floyd M. Burgeson,** of Des Moines, announced his candidacy for the Republican nomination for Iowa Fifth District Representative in the U. S. Congress. **Mr. Neal Smith,** of Altoona, a Democrat, is the incumbent. The Fifth District consists of Story, Dallas, Polk, Madison, Warren and Marion counties.

Dr. Carroll B. Larson, professor and head of orthopedics at SUI, was the guest speaker at the December meeting of the Johnson County Medical Society. Dr. Larson spoke on "Low Back Pain."

Dr. William C. Keettel, head of the Department of Obstetrics and Gynecology at the University of Iowa College of Medicine, delivered an address to the Omaha-Douglas County Medical Society at Omaha on November 10. His subject was "Amenorrhea: Its Treatment and Management."

Dr. Keettel also participated in a three-day postgraduate course at the University of Oregon, December 2-4. He spoke on the subjects "Amenorrhea" and "Vesicovaginal Fistula," and participated in a round-table discussion on the beneficial and detrimental aspects of ruptured membranes.

Dr. James T. Bradbury, professor of obstetrics and gynecology at the State University of Iowa's College of Medicine, participated in a workshop session on gonadotrophic hormones held December 3-5 in Gatlinburg, Tennessee. The workshop was sponsored by the Endocrine Study Section of the National Institutes of Health. Of the 35 scientists participating, 11 were from foreign countries.

A tribute to the late **Dr. Arthur Steindler** was read at the 13th Annual Meeting of the American Academy for Cerebral Palsy in Los Angeles on December 2, by **Dr. Ignacio V. Ponseti** of the Department of Orthopedic Surgery at SUI. At the same meeting, **Dr. R. R. Rembolt,** director of the SUI Hospital-School for Severely Handicapped Children and professor of pediatrics in the University's College of Medicine, was installed as president of the American Academy for Cerebral Palsy.

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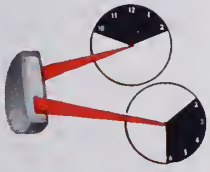
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1. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958.
2. Lbotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

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Dr. MacDonald Critchley, of the National Hospital for Nervous Diseases in London, spoke in the medical amphitheater of the State University of Iowa Hospitals on December 3. Dr. Critchley, whose talk was sponsored by the Department of Neurology and Psychiatry, spoke on "The Language of Gesture."

Three physicians in the SUI Department of Internal Medicine are authors of chapters in a new medical textbook entitled DISEASES OF THE CHEST, INCLUDING THE HEART, published by Charles C Thomas, Springfield, Illinois. **Dr. William Bean** contributed chapters on "Coronary Artery Disease: Some Aspects of the Natural History of Ischemic Heart Disease," "Heart Disease and Pregnancy: General Physiologic Considerations" and "Rare Diseases of the Cardiovascular System." **Dr. Ernest O. Theilen** contributed chapters on "Cardiac Arrhythmias," "Diseases of the Aorta and Cardiovascular Syphilis," and "Cor Pulmonale." **Dr. Raymond F. Sheets** wrote the chapters on "Deformities of the Cardiac Valves," and "Myocarditis." **Dr. Bernard I. Lewis,** now of the Palo Alto Clinic in Palo Alto, California, but formerly of the Department of Internal Medicine staff at SUI, contributed a chapter entitled "Emotions and the Circulation."

Drs. Donald V. Walz, Richard E. Peterson and **Richard Lawton,** all of Veterans Hospital, Iowa City, collaborated on a scientific exhibit entitled "Uses and Abuses of Blood Transfusions" which was awarded honorable mention at the annual meeting of the American Association of Blood Banks, in Chicago early in November.

The Mississippi Valley Medical Society held its annual election of officers at Quincy, Illinois, Sunday, November 22. **Dr. Arkell M. Vaughn,** of Chicago, was installed as president succeeding **Dr. Arthur F. Fritchen,** of Decorah. **Dr. Paul J. Leehey,** of Independence, was elected vice-president for Iowa. Among the 1960 directors previously elected are **Drs. F. R. Peterson,** of Cedar Rapids, and **George C. McGinnis,** of Fort Madison. **Dr. Harold Swanberg,** of Quincy, Illinois, who has served for 25 years as secretary-treasurer, declined re-election because of ill health. He was given an ovation for his loyal and faithful service to the Society.

At the annual dinner meeting of the St. Vincent Hospital staff, Sioux City, on December 1, **Dr. John S. Tracy** was elected president, succeeding **Dr. Frederick J. Lohr.** Other officers elected were **Dr. Charles M. Marriott,** vice-president and **Dr. E. J. Tierney,** secretary.

Dr. Paul M. Kersten, a Fort Dodge physician and chairman of the mental health committee of the Iowa State Medical Society, attended the AMA meeting in Chicago, on November 19-21, for chairmen of all such mental health committees in the United States.

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Dr. William K. Whitehouse, son of **Dr. William N. Whitehouse**, of Ottumwa, has joined **Drs. Walter E. Herrick** and **D. Dale Emerson** in the practice of medicine there. The younger Dr. Whitehouse is a graduate of SUI and interned at Mercy Hospital in Cedar Rapids.

The New Hampton Medical Center held open house December 6. The New Hampton Medical Associates, who occupy the building, include **Drs. J. D. Caulfield, M. J. McGrane, J. E. Murtaugh, E. C. O'Conner, P. M. Porter,** and **P. C. Richmond.** The facilities of the clinic had been in use for six weeks prior to its formal opening.

Governor Herschel Loveless has asked the Iowa State Medical Society, Iowa Bar Association, District Judges Association of Iowa, Iowa Academy of General Practitioners and the Iowa Welfare Association to submit nominations to a committee which he is initiating to draft proposed changes in the laws governing commitment and discharge of the mentally ill in Iowa. **Dr. James O. Cromwell,** director of mental health, and **Dr. Paul Huston,** director of the SUI Psychopathic Hospital, will represent the state, Governor Loveless said.

As chief of staff at Broadlawns-Polk County Hospital, **Dr. Everett M. George** wrote a letter to **Mrs. Elizabeth G. Parker** expressing his group's dissatisfaction with her dismissal as administrator of the hospital. He said, in part, "During your 35 years of noteworthy service to the Hospital, your relationships with the Medical Staff in providing the best care possible to the patients have always been graciously provided to the best of your ability. Our appreciation of your cooperation is but a small token of the high regard we hold for your efforts in behalf of the patients and Staff."

Mr. D. L. Maloney, chairman of the Broadlawns Board of Trustees, **Mr. W. W. Woods,** Board member and former chairman, and **Mr. William A. Myers, Jr.,** chief engineer at the institution, tendered their resignations at about the same time, protesting Mrs. Parker's dismissal and other recent actions of the Board.

The Des Moines Medical Center, which is being built just south of Mercy Hospital, is to consist, for the present, of two buildings, one of which should be completed late in January and the second in February. They are two-level, L shaped structures located on the upper half of a 3½ acre sloping site. Parking space will be provided both at upper and lower levels. The freeway through Des Moines is to pass just south of this development, but the "loop" area of Des Moines will be easily accessible by means of major arterial streets.

The physicians who will occupy the first two buildings include: **Drs. D. C. Wirtz** and **Marvin Dubansky,** orthopedic surgeons; **Drs. F. C. Coleman, C. H. Denser, Jr.,** and **M. A. Meservey,** pa-

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*Bibliography available on request.

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thologists; **Drs. R. E. Hines, N. W. Irving, Jr.,** and **F. A. Springer,** radiologists; **Drs. T. W. Milroy, K. G. Huston, L. R. Pearlman** and **Alice Collins,** anesthesiologists; **Dr. M. E. Alberts,** pediatrician; **Drs. H. G. Ellis** and **E. D. McClean,** surgeons; **Dr. Walter Kirch,** otholaryngologist; **Dr. A. E. Schill,** gynecologist; and **Drs. Charles R. Peterson, F. S. Katzmann** and **W. W. Hayne,** general practitioners.

Election of officers and delegates for the Polk County Medical Society will take place at its annual meeting, January 20, 1960, at the Des Moines Golf and Country Club. All members in good standing are urged to attend.

NEW HORIZONS, a publication of the Iowa Division of the American Cancer Society for many years is to be discontinued. This action springs from a decision of the Board of Directors that the publication has not been carrying enough information to the public to merit the expense involved in printing it.

Members of the Scott County, Iowa, and Rock Island County, Illinois, Medical Societies attended a symposium presented by the Lederle Company at LeClaire Hotel, Moline, on the afternoon of December 2. Topics dealt with in round-table discussions were "Heart Disease in Children," "Jaundice and Biliary Disease" and "Adrenal Physiology and Its Clinical Implications." In the evening, the two groups met at the Blackhawk Hotel, in Davenport, where **Mr. Roger W. Peterson,** of Bloomington, Illinois, spoke to them on the topic "Net After Taxes."

Dr. Carroll A. Brown was elected president of the St. Joseph Mercy Hospital, Sioux City, at an annual staff dinner meeting November 3. Others elected to office were **Dr. H. E. Rudersdorf,** vice-president, and **Dr. Robert C. Larimer,** secretary-treasurer.

NEW REASON FOR PROMPT SURGERY IN INFANTS

Drs. H. R. Schaffer and W. M. Callender, of the Royal Hospital for Sick Children in Glasgow, declare that in elective surgery cases an infant should whenever possible be operated upon before he reaches seven months of age, rather than be put on a waiting list.* Their reason for that pronouncement, derived from a study of 76 infants admitted to their hospital at ages ranging from 3 to 51 weeks, is that separation trauma is a phenomenon that does not occur in babies prior to that age, but is relatively serious thereafter.

* Schaffer, H. R., and Callender, W. M.: Psychologic effects of hospitalization in infancy. PEDIATRICS, 24:528, (Oct.) 1959.



DEATHS

Dr. David M. Ghrist, 94, a former Ames doctor, died on November 14 in Memorial Hospital, Glendale, California.

Dr. Clyde Rudolph Van Voorhis, 82, a retired Prairie City physician, died after a lingering illness November 10 at Veterans Hospital, Des Moines. Dr. Van Voorhis practiced medicine in Prairie City from 1913 until his retirement three years ago and during that time was on the staff of the Iowa Lutheran Hospital.

Dr. R. Glenn Whitmer, of Des Moines, formerly of Fremont, died November 12 following a heart attack. Dr. Whitmer had been on the staff of Veterans Hospital since June.

Dr. Phillip V. Ketchum, 86, died of a heart ailment November 24 at Veterans Hospital, Fort Miley, San Francisco. Dr. Ketchum was chief of Public Health work for many years in Cheyenne, Wyoming, and had also practiced at Elkhart and Cambridge, Iowa.

MÉNIÈRE'S DISEASE THERAPY

Success with a corticosteroid in the treatment of Ménière's disease has been reported by Dr. Emanuel Hauser, of New York City, in the November issue of the JOURNAL OF THE AMERICAN GERIATRICS SOCIETY.* Dexamethasone (Deronil®, Schering), he says, was effective, within 24 hours, for example in terminating an attack of vomiting, dizziness and loss of hearing in a 64-year-old physician who had suffered from the disease for 20 years, and in a 34-year-old housewife it stopped the attacks immediately and restored hearing. Attacks have recurred in neither individual.

Dr. Hauser explained that published reports indicate no previous attempts to treat the disease in this manner, but that allergic reactions in his patients prompted him to make the trials. Conventional technics, he says, "cannot be considered specific or overly successful."

* Hauser, E.: Ménière's disease: new therapeutic approach. J. AM. GERIATRICS SOC., 7:874, (Nov.) 1959.

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Common illnesses that strike American families and their treatment by family physicians provide the subject matter for a new series of public service radio programs that commenced early in December on the nationwide network of the American Broadcasting Company.

The series, under the supervision of the AMA, is called "Highroad to Health," and is being presented in cooperation with Lederle Laboratories, a division of the American Cyanamid Company.

Weekly programs of 15 minutes each will deal with a wide range of health problems ranging from the careless household accident to the burdens created by chronic illness. Subjects to be covered include hypertension, acute childhood infections, cancer, household accidents, toxemia of pregnancy, chronic illness, geriatrics, mental health, rheumatic fever, tetanus, surgery, nutrition and medical emergencies.

The ABC affiliates in Iowa include KBUR—Burlington, KCBC—Des Moines, KDTH—Dubuque, KMCD—Fairfield, KMA—Shenandoah, KSCJ—Sioux City, and KXEL—Waterloo. Stations just beyond the Iowa borders include KATE—Albert Lea, Minnesota, KSWI—Omaha-Council Bluffs, KIRX—Kirksville, Missouri, WQUA—Moline, WGEM—Quincy, KSOO—Sioux Falls, and WKTY—LaCrosse. The programs are being made available to stations each Wednesday at 2:15 p.m. and each Saturday at 10:30 a.m., and the local program directors can choose between those times.

Each program opens with a nine-minute dramatization of a health problem. This is followed by a five-minute discussion of it by a guest physician, who will then answer questions posed by the program host.

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Journal of the IOWA STATE MEDICAL SOCIETY

Vol. L FEBRUARY, 1960 No. 2

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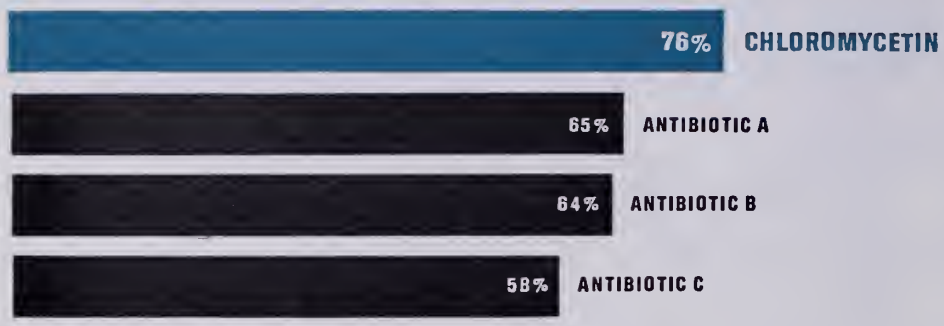
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Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

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REFERENCES: (1) Leming, B. H., Jr., & Flanigan, C., Jr., in Welch, H., & Marti-Ibânez, F.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 414. (2) Goslings, W. R. O., & Buchli, K.: *Arch. Int. Med.* 102:691, 1958. (3) Suter, L. S., & Ulrich, E. W.: *Antibiotics & Chemother.* 9:38, 1959. (4) Metzger, W. I., in Welch, H., & Marti-Ibânez, F.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 966. (5) Fischer, H. G.: *Deutsche med. Wchnschr.* 84:257, 1959. (6) Borchardt, K. A.: *Antibiotics & Chemother.* 8:564, 1958. (7) Schneierson, S. S.: *J. Mt. Sinai Hosp. New York* 25:52, 1958. (8) Waisbren, B. A.: *Wisconsin M. J.* 57:89, 1958.

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SEARLE

The Month in Washington



Washington, D. C.—Overshadowing all other developments from the standpoint of the medical profession was the flat prediction from a high Administration official and key lawmakers that Congress this year would vote some sort of liberalization of the Social Security program.

There was general agreement that Congress would broaden the Social Security plan for permanently and totally disabled persons by removing the requirement that a person has to be at least 50 years of age before receiving such benefits.

However, there were forecasts of even further liberalization. House Speaker Sam Rayburn (D., Texas) said monthly cash benefits also may be boosted. On the other hand, the House leader said he believed a majority of the House Ways and Means Committee were opposed to the disputed Forand bill that would finance partial health care for the elderly through higher Social Security taxes at an estimated extra cost of $2 billion annually. As a result, he said he did not think "there was a great deal of chance for it." But the AFL-CIO and some Congressional backers of the highly controversial bill were urging Congress to approve it this year.

Arthur S. Flemming, Secretary of Health, Education and Welfare, asserted that the Administration is planning to offer a program aimed at assisting needy aged to meet health bills, but gave no details. The official noted that the Administration has firmly opposed the Forand-type approach on grounds it would destroy the rapid progress that has been achieved in meeting the problem through private means. But Flemming, in a speech before the American Association of University Teachers of Insurance, said the Administration has an obligation "to stay with it" until it arrives at a plan.

Congress has extended the Social Security program every presidential election year since 1948, and 1960 appears to be no exception. Whether or not the issue of medical care for the aged will be included was one of the big question marks early in the session.

Shortly before Congress convened, the Boards of Trustees of the AMA and the American Hospital Association, in a joint resolution, pledged to "mobilize their full resources to accelerate the development of adequately financed health care programs for needy persons—especially the aged needy—" at state and local levels.

The Boards said Forand-type legislation is "not designed to assist the needy, since they apply to all Social Security beneficiaries and exclude the majority of needy persons, who are not eligible for Social Security benefits."

Following the action, Dr. Louis M. Orr, AMA president, and three other AMA officials—Dr. E. Vincent Askey, AMA President-Elect, Dr. F. J. L. Blasingame, executive vice-president, and Dr. Ernest B. Howard, assistant executive vice-president—visited Vice President Richard M. Nixon at his Washington office. They told the Vice President that by the end of this year an estimated 60 per cent of the nation's aged persons who want and need voluntary health insurance will have it.

Mr. Nixon, according to the officials, was delighted to receive the information and "very much interested" in the program of voluntary health insurance for the aged.

* * *

Physicians who are officers of qualified clinics would be entitled to deduct as business expenses money set aside for their retirement under a proposed regulation of the Internal Revenue Service. The decision climaxed a five-year effort of a group of Montana physicians to secure such tax treatment, and marked an important tax development for physicians who operate clinics. Self-employed physicians continue to be barred from similar tax treatment, though there is legislation before the Senate Finance Committee that would afford them tax deferrals on funds set aside for retirement.

BLUE SHIELD EXPENSE PERCENTAGES ARE DOWN

Financial reports of Blue Shield, both nationally and in Iowa, show that expenditures for operational expenses, expressed as percentages of earned premium income, were lower for the first nine months of 1959 than they had been in 1958. For all 73 plans in the first nine months of 1959, the figure was 9.81 per cent, down from 10.23 per cent for the full year 1958, and for the Iowa plan alone, it was 9.42 per cent, down from 10.19 per cent for the previous full year.

Yet, it should be noted that both nationally and in Iowa, Blue Shield showed losses on its surgical and inpatient medical insurance business for the period that ended on September 30, 1959. For all 73 plans, operating expenses and claim payments together amounted to 101.08 per cent of earned subscription income, and for Iowa Blue Shield alone they totaled 100.78 per cent of earned premiums. During 1958, the Iowa plan had shown a profit of $5,996 (.06 per cent of earned premiums) on its insurance business, which, added to its investment income, made its net $110,759 for that previous full year.

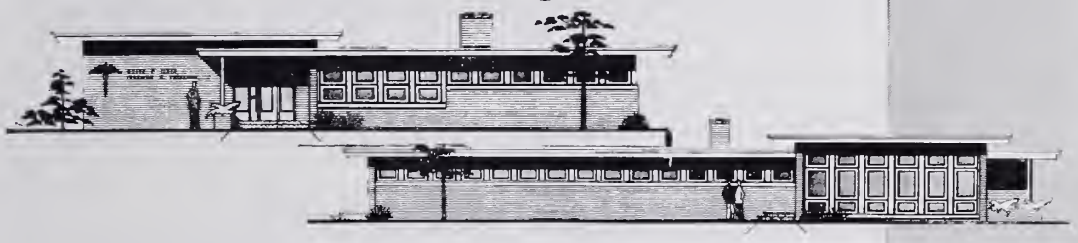
For its total operation, both nationally and in Iowa, Blue Shield was in the black for the first nine months of 1959, since its investment income was more than sufficient to cover its operating deficits. But its margins of safety were quite narrow. Net operating income for the Iowa plan was $32,501 for the first nine months of 1959 on a business that had grossed approximately $1,000,000 per month, and the net for all 73 plans was only $388,947 for the same period.

As of September 30, 1959, Iowa Blue Shield had reserves equal to 2.07 months' operating expenses, down from 2.49 at the close of the preceding year, and the 73 plans had reserves equal to 3.57 months' operating expenses, down from 3.95 as of December 31, 1958.

PSYCHOSOMATIC DENTISTRY AND MEDICINE

The annual meeting of the American Society of Psychosomatic Dentistry and Medicine will be held at the Shoreham Hotel, Washington, D. C., March 11-13. Lectures and round table discussions will be presented by outstanding authorities in the fields of semantics, linguistics, psychosomatics and hypnosis. All dentists and physicians are cordially invited to attend. For copies of the detailed program, address Dr. Jesse Caden, chairman, Program Committee, 5213 Connecticut Avenue, Washington 15.

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ACS SECTIONAL MEETING IN MINNESOTA

Surgeons and related medical personnel are invited to attend the Sectional Meeting of the American College of Surgeons that will be held in Minneapolis on April 11, 12 and 13, and in Rochester on April 14. Headquarters in Minneapolis will be Hotel Leamington, and in Rochester, the Mayo Clinic.

The programs will include scientific reports on the surgical treatment of regional ileitis, early surgical graft coverage of deep burns, surgery for peptic ulcer, surgical diseases of the spleen, management of acute renal failure, management of various types of trauma, prophylactic and adjuvant treatment of cancer of the breast, endometrial cancer, cancer of the cervix, gastrointestinal bleeding, recent advances in surgery for pancreatic disease, fibrous tumors of the soft tissues, parenteral therapy of the surgical patient and pitfalls of biliary tract surgery.

In addition to the general surgery programs at Minneapolis and Rochester, there will be a one-day otolaryngology program and a one-day ophthalmic surgery program in Rochester. An extensive series of hospital programs will be presented in addition to sessions in the hotels.

Copies of the program can be secured from the office of the American College of Surgeons, 40 East Erie Street, Chicago 11.

OPHTHALMOLOGICAL CONFERENCE

The Chicago Ophthalmological Society will hold its annual clinical conference on February 12 and 13, 1960, at the Drake Hotel, Chicago. The guest speakers will include Dr. Walter Atkinson, Watertown, N. Y.; Dr. Gilbert Baum, Port Chester, N. Y.; Dr. James Bennett, Cleveland; Dr. Paul Cibis, St. Louis; Dr. Robt. Hollenhorst, Rochester, Minn.; Dr. Bertha A. Klien, Chicago; Dr. Peter C. Kronfeld, Chicago; Dr. Oscar Sugar, Chicago; Dr. Isaac Tassman, Philadelphia; and Dr. Derrick T. Vail, Chicago.

The subjects will include a symposium on retinal disorders, ophthalmo-dynamometry in intracranial vascular disease, observation on cataract surgery, ultrasonography in clinical ophthalmology, photocoagulation of iris and retina, a new surgical approach to lacrimation problems, a neurosurgeon looks at ophthalmology, and ligament of wieger.

The registration fee for the entire course, including round table luncheons and the dinner following the Gifford lecture, will be $45 and may be paid in advance to the registrar, Mrs. Edward J. Ryan, 1150 North Lorel Avenue, Chicago 51.

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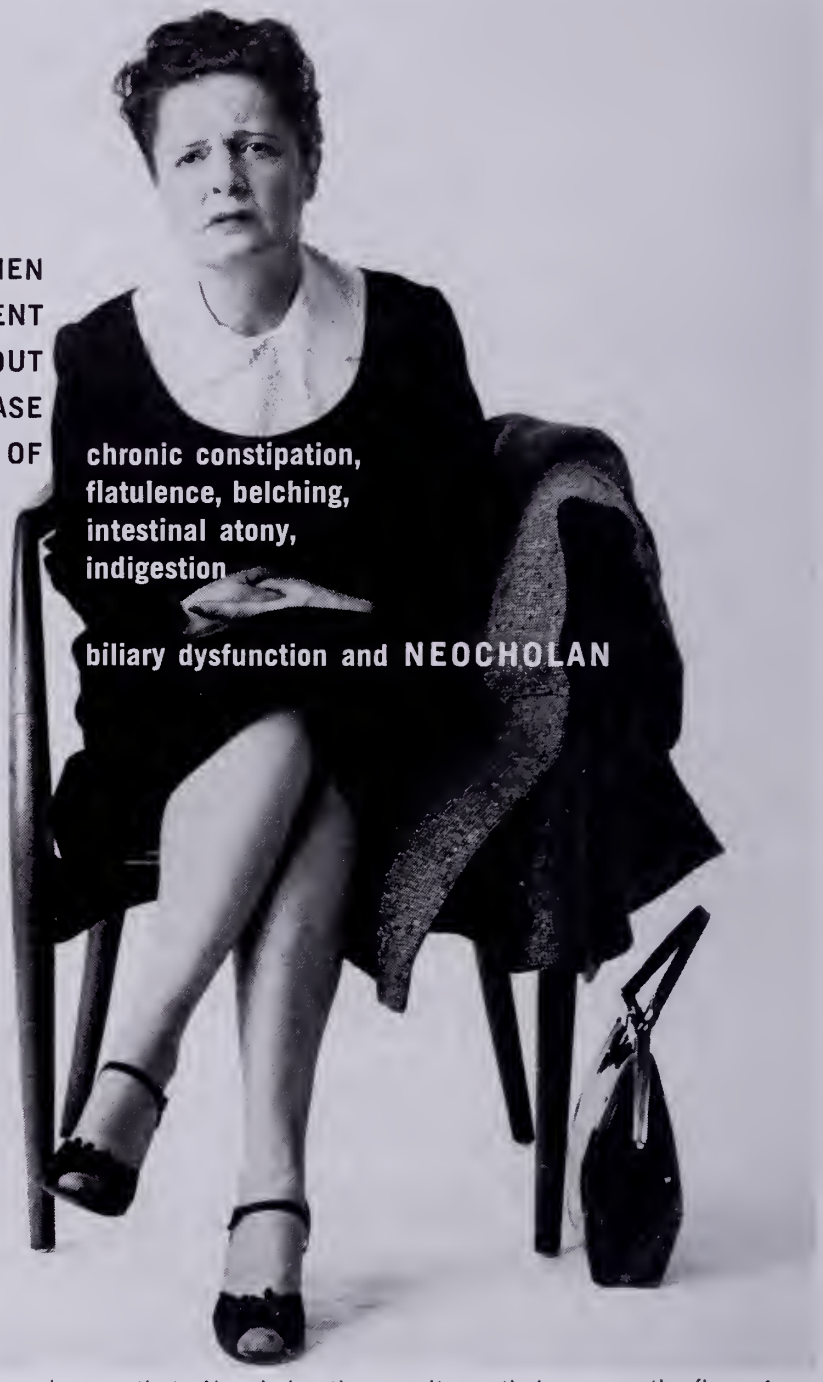
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Personals



Dr. John Hornberger, of Manning, was elected president of the staff at St. Anthony Hospital, Carroll, at a meeting held on December 15. Dr. Hornberger succeeds **Dr. Roland B. Morrison.** Other newly elected officers were **Dr. Paul T. Cawley,** vice-president and **Dr. Charles A. Fangman,** secretary-treasurer, who was re-elected. The latter three physicians practice in Carroll.

Dr. Rufus Kruse, of Marshalltown, was elected president of the staff of Evangelical Hospital at the annual meeting Tuesday, December 8. At the same meeting **Dr. W. R. Wessels** was elected vice-president and **Dr. Russell Watt,** secretary-treasurer.

Dr. A. T. Engelmann, of Sioux City, was named president of the Lutheran Hospital staff at a staff meeting early in December. He succeeds **Dr. D. E. Howard** in the post. Others named to office include **Dr. R. C. Larimer,** vice-president, and **Dr. Charles M. Marriott,** secretary-treasurer. Elected to the staff executive committee were **Drs. J. A. McFarlane, I. U. Vangsness** and **A. W. Horst.**

At the December 15 meeting of the Pottawattamie County Medical Society, **Dr. Irving J. Hanssmann,** of Council Bluffs, was named president-elect of the society. **Dr. Fred H. Beaumont** is the current president. Other officers include: **Dr. C. V. Edwards, Sr.,** vice-president; **Dr. Gerald Caughlan,** secretary-treasurer; and **Drs. Ralph Hopp, A. L. Nielson, R. E. Joranson** and **G. L. Neligh, Jr.,** all new council members.

Dr. J. E. O'Donnell, of Clinton, has been appointed Iowa regent of the International College of Surgeons. He succeeds the late **Dr. Arthur Steindler,** of Iowa City, in the appointment.

Dr. G. M. Skallerup, of Red Oak, was elected president of the medical staff at Corning's Rosary Hospital at that group's December 7 meeting. **Dr. C. L. Bain,** of Corning, was named vice-president and **Dr. R. W. Boulden,** of Lenox, secretary.

Dr. John Wanamaker has discontinued his medical practice at Harlan and has moved to Rock

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Dr. Edward H. Rynearson, of the Mayo Clinic, was principal speaker at the meeting of the Linn County Medical Society in Cedar Rapids on January 14. His topic was "Syndromes Associated With Over-Function of the Adrenal Cortex."

At the December meeting of the Tama County Medical Society the following officers were elected for the year 1960: **Dr. C. W. Maplethorpe, Sr.,** Toledo, president; **Dr. L. G. Schaeferle,** Gladbrook, vice-president; **Dr. A. J. Havlik,** Tama, secretary-treasurer; **Dr. A. J. Wentzien,** Tama, delegate; Dr. A. J. Havlik, Tama, alternate delegate, and **Dr. C. R. Roberts, Dysart,** censor. At the same meeting **Drs. L. O. Goodman** and **R. C. Carpenter,** of Marshalltown, participated in the general discussion of "The Welfare State in General, and Aging in Particular." The kit entitled "The Medical Profession's Program on Aging . . . A Community Responsibility" was used as a basis for discussion along with filmstrip "Time of Decision" and a recording of an address by **Dr. Louis M. Orr,** president of the AMA.

The Audubon County Medical Society reports the following officers elected at its December meeting: **Dr. W. H. Halloran,** president; **Dr. P. E. James,** vice-president; **Dr. J. L. Greene,** secretary-treasurer; **Dr. L. E. Jensen,** delegate and **Dr. H. K. Merselis,** alternate delegate.

Dr. Charles H. Sprague, a former superintendent of Broadlawns Hospital, in Des Moines, has retired as assistant superintendent and senior psychiatrist of the Idaho State Hospital for Mental Diseases. It was during Dr. Sprague's superintendency that the three units of Broadlawns were consolidated, and its clinic reorganized.

The 1960 membership campaign of the Iowa Heart Association is underway, with 482 members to date. This figure represents 423 physician and 59 lay members. Membership last year was made up of 569 physicians and 122 lay people.

The Board of Directors of the Iowa Heart Association, in a meeting on November 29, took under advisement a proposal by the representatives of the Black Hawk County Heart Committee which would result in greater autonomy of Heart Councils and Heart Committees. In other actions, the Board approved the report of the Research Committee on the transmittal of $16,380 to the research program of the American Heart Association, and deferred action on the following recom-

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mendations of the Professional Education Committee: (1) free distribution of MODERN CONCEPTS for one year to newly established physicians; (2) distribution of the HEART BULLETIN as a basic council professional education program, and (3) increasing membership dues to physicians.

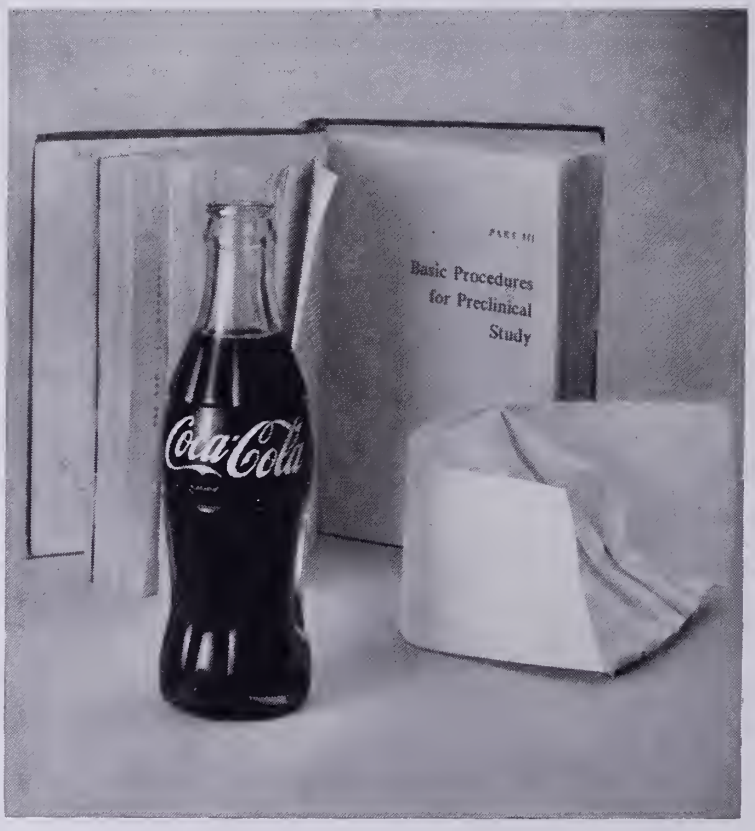
The Coon Valley Heart Council of the Iowa Heart Association sponsored its Second Annual Physicians Seminar on Cardiovascular Diseases on January 14, at Hotel Warden, Fort Dodge. The late afternoon-early evening seminar featured three physician speakers who are experts in their specific areas of heart disease diagnosis and treatment. **Dr. John Gustafson,** of the United Heart Station in Des Moines, spoke on "Congenital Heart Disease, Its Amplification, and ECG Changes From Infancy Through Early Childhood"; **Dr. Daniel J. Sheehan**, of the Mental Health Institute in Cherokee, discussed "Practical Diagnostic Considerations and Management in Acute Myocardial Infarction"; and **Dr. John L. Juergens**, of the Mayo Clinic, spoke on "The Diagnosis and Treatment of Arteriosclerosis Obliterans." Featured speaker at the 6:45 p.m. dinner was **Mr. John B. Hermann**, executive director of the Iowa Heart Association, who spoke on "An Independent Heart Fund—Is It Necessary?"

The Research Committee of the Iowa Heart Association met on December 6, 1959, in Iowa City and approved grants totalling $28,000 for the 1960-61 projects that are to be underway by July, 1960. Recipients at the State University of Iowa are: **Dr. George N. Bedell—**his project, "Lung Function in Patients With Cardiac Failure"; **Dr. Ernest. O. Theilen,** "Effects of Thyroid Hormone on Muscle Contractility"; **Dr. William E. Connor,** "Lipid Metabolism in Atherosclerosis" and **Dr. Daniel Stone,** "Diet and Vascular Complications in Diabetes Mellitus."

Grant recipients and projects at Iowa Methodist Hospital, Des Moines, are: **Dr. John E. Gustafson,** "ECG Changes From Infancy Through Early Childhood"; **Dr. William Myerly,** "Anoxic Arrest With Intermittent Coronary Perfusion" and "Pumping Support for the Failing Heart."

At Iowa State University, Ames, are: **Neal R. Cholvin, D.V.M.,** "Instrumentation for Cardiology of the Dog"; and **Mr. Melvin J. Swensen** and **Mr. Richard B. Talbot,** "Cardiovascular Dynamics Involving Blood Volume."

Clifford Meints, Ph.D., at Simpson College, Indianola, received a research grant for his project "Physicial Chemistry and Structure of Poly-D-Glutamic Acid"; **William R. Clark, Ph.D.** and **Frances H. Clark, Ph.D.,** of Parsons College, Fairfield, are to receive grants for their project, "Studies on Tissue Thromboplastins"; and also **Elmer**



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Hertel, Ph.D., of Wartburg College, Waverly, for his project "A Study of Collateral Circulation in Amphibians." The next meeting of the Research Committee is scheduled for March 13, 1960. At that time additional applications for 1960-61 research support will be considered.

Dr. John R. Gardner, of Lisbon, the only remaining charter member of the Linn County Medical Society, was honored at a dinner meeting of the Cedar Rapids Chamber of Commerce on Wednesday evening, December 9. With the exception of a 2½ year period during World War I, he has practiced medicine in Lisbon since 1900, and prior to the formation of the Linn County Medical Society, he was a member of the Northeast Iowa Medical Society. A past president of the Linn County Medical Society, Dr. Gardner was cited for "holding an honored place in the health, growth and development of his community."

The Iowa State Medical Society board of trustees accepted the resignation of **Dr. N. Boyd Anderson**, of Des Moines, as treasurer of the Society effective December 22, 1959. Dr. Anderson has retired from the active practice of surgery. **Dr. Herman J. Smith**, of Des Moines, will complete the unexpired term of Dr. Anderson. As treasurer, Dr. Smith also becomes a member of the board of trustees.



Dr. Luke Chang

Dr. Luke Chang, a former assistant professor in the College of Medicine at SUI, has recently become associated in the practice of medicine with the Independent Medical Surgical Group of Mason City. He will limit his practice to internal medicine. Other members of the Group are **Dr. C. B. Tice, Dr. George Tice, Dr. Travis Westly** and **Dr. L. J. Kirkham.**

Dr. Don G. Bock was elected president of the Webster County Medical Society at the annual meeting held recently in the Assembly Room of the Hotel Warden, Fort Dodge. **Dr. Donald E. Tyler** is the retiring president. **Dr. Dan S. Egbert** was named vice-president, succeeding Dr. Bock, and **Dr. J. F. Kelly** was named secretary-treasurer,



succeeding **Dr. Kenneth Wilcox.** Elected delegates to the Annual Meeting of the Iowa State Medical Society were **Dr. H. H. Kersten** and **Dr. Robert Lee. Dr. Eric Swanson** and **Dr. O. N. Glesne** were named alternates. **Dr. W. R. Fieseler** was elected executive committee member, and **Drs. E. F. Beeh** and **Eric Swanson** were named to the Society's board of censors.

A school for medical laboratory technologists in Ottumwa has been approved by the American Medical Association. **Dr. David O. Holman,** pathologist, will conduct the school at the Ottumwa and St. Joseph Hospitals and at Physicians Clinical Laboratories. He stated that enrollment is to be limited to 12 students the first year.

Dr. Walter Abbott, a Des Moines neurosurgeon, underwent surgery at Mercy Hospital early in January, and at last report was recovering satisfactorily. Dr. Abbott is a past-president of the Iowa State Medical Society.

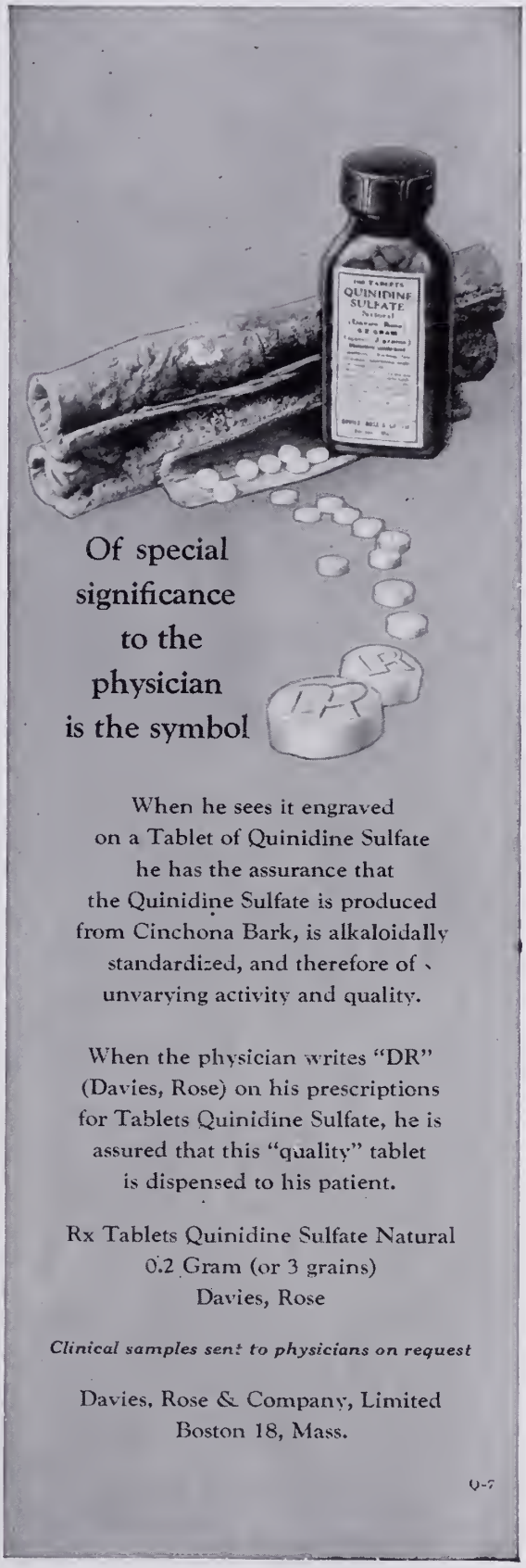
At the December meeting of the Carroll County Medical Society, **Dr. R. J. Ferlic,** of Carroll, was elected president succeeding **Dr. J. M. Tierney.** At the same meeting **Dr. Paul T. Cawley** was named vice-president, and **Dr. Charles A. Fangman,** secretary.

At the December meeting of the Cerro Gordo County Medical Society, **Dr. George Tice** was elected president; **Dr. Robert Brown,** vice-president; **Dr. Richard Utne,** secretary and **Dr. Stephen Westly,** treasurer. Cerro Gordo County delegates to the Annual Meeting of the Iowa State Medical Society will be **Dr. Guido Sartor, Dr. Leslie W. Swanson** and **Dr. James Lannon.** Alternate delegates named were **Dr. Harold W. Morgan, Dr. F. William Saul** and **Dr. Jerome Paulson.** All of these doctors practice in Mason City.

Dr. Kirk Strong, of Fairfield, was elected president of the Jefferson County Medical Society at its meeting on December 10. He succeeds **Dr. F. H. McClurg,** also of Fairfield, in that office. Other new officers are **Dr. James Dunlevy,** vice-president, and **Dr. James Turner,** secretary-treasurer.

The contract has been let and work started on a new $29,000, two-doctor clinic at Anthon. Completion is expected by April 1, 1960.

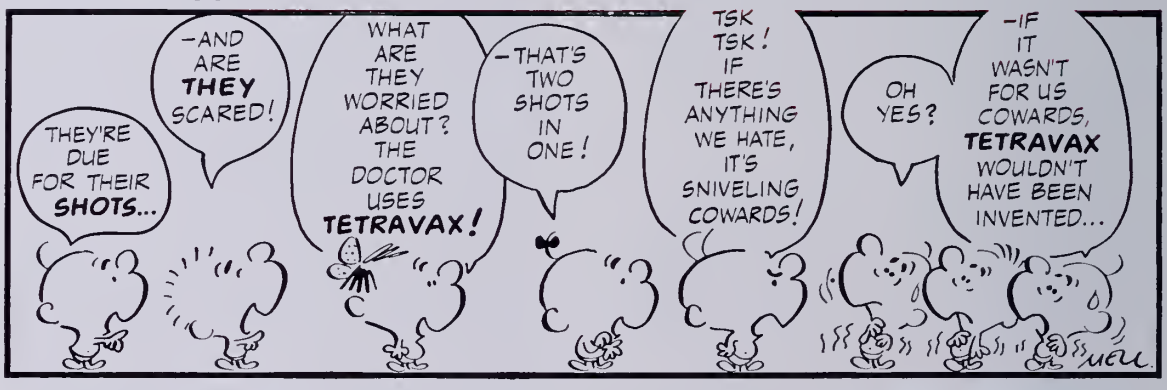
Dr. Robert A. Powell, a general practitioner in Shenandoah, has announced that he is closing his practice. He is currently attempting to secure another doctor to occupy his office.



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At the December meeting of the Cherokee County Medical Society, **Dr. Charles Ellsworth** was elected president for the year 1960. **Dr. H. D. Seely** was named secretary-treasurer. At the same meeting **Dr. D. C. Koser** was named delegate to the State Medical Society's Annual Meeting and **Dr. J. H. Wise,** alternate delegate. All of them practice in Cherokee.



Dr. John W. LaMar

Dr. John W. LaMar, a native of Des Moines, recently became associated in the practice of medicine with **Drs. J. E. Blumgren** and **D. C. Weideman** at Vinton. Dr. LaMar is a graduate of Grandview Junior College and Drake University, in Des Moines, and the SUI College of Medicine. He interned at St. Luke's Hospital in Duluth.

At the annual meeting of the medical staff of St. Luke's Hospital, Davenport, on December 15, **Dr. Carl Matthey** was elected president, **Dr. Walter Balzer,** vice-president and **Dr. Alexander Boone,** secretary.

Dr. Roger Minkel is resuming practice at the Swea City Clinic after an absence of 20 years. His previous practice there in 1940 was interrupted by 5 years of military service, after which he practiced for several years at Fort Dodge and in South Dakota.

At a recent meeting of the Grundy County Medical Association, **Dr. John Jaquis,** of Reinbeck, was elected president of the organization, and as president will serve as chief of staff of the Grundy County Memorial Hospital for the year 1960. Other officers elected were **Dr. R. J. Meyer,** of Wellsburg, vice-president, and **Dr. Lynn Frink,** of Reinbeck, secretary-treasurer.

At the December 10 meeting of the Sac County Medical Society, **Dr. John Hubiak,** of Odebolt, was elected president and **Dr. Gene Michel,** of Sac City, secretary-treasurer. At the same meeting **Dr. J. W. Gauger,** of Early, was elected delegate to the Annual Meeting of the Iowa State Medical Society, **Dr. William Evans,** of Sac City, was named alternate delegate.

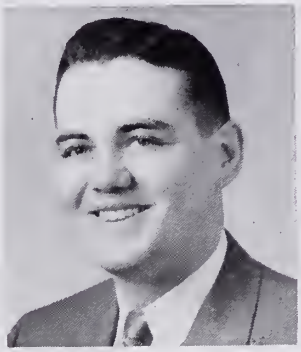
The Johnson County Medical Society met January 6, 1960, at the Veterans Administration Hospital, Iowa City. **Drs. R. E. Peterson, D. V. Walz** and **R. L. Lawton** collaborated in the scientific presentation entitled "The Uses and Abuses of Blood Transfusion."

Dr. G. A. Sywassink was elected chief of staff of Muscatine General Hospital at a staff meeting December 22. **Dr. John Klein** was named assistant chief of staff and **Dr. Robert Asthalter,** secretary and treasurer. Dr. Sywassink succeeds **Dr. E. H. Carlson** as chief of staff.

At the December meeting of the Woodbury County Medical Society, **Dr. J. M. Krigsten** became president succeeding **Dr. John Lutton.** Newly chosen officers were **Dr. Verne R. Heimann,** president-elect; **Dr. Donald J. Wagner,** vice-president; **Dr. Dwayne E. Howard,** secretary; **Dr. Charles Marriott,** treasurer; and **Dr. Joseph E. Dvorak** and **Dr. Wayland K. Hicks,** censors. At the same meeting **Drs. P. L. Bettler, H. E. Rudersdorf, J. W. Bushnell, P. M. Cmeyla** and **J. D. Lutton** were chosen as delegates, and **Drs. Donald Blume, Fredric W. Wilson, John Tiedeman, William Davey** and **Milton Grossman** were elected alternate delegates to the State Medical Society meeting in the spring. All of these men are located in Sioux City.

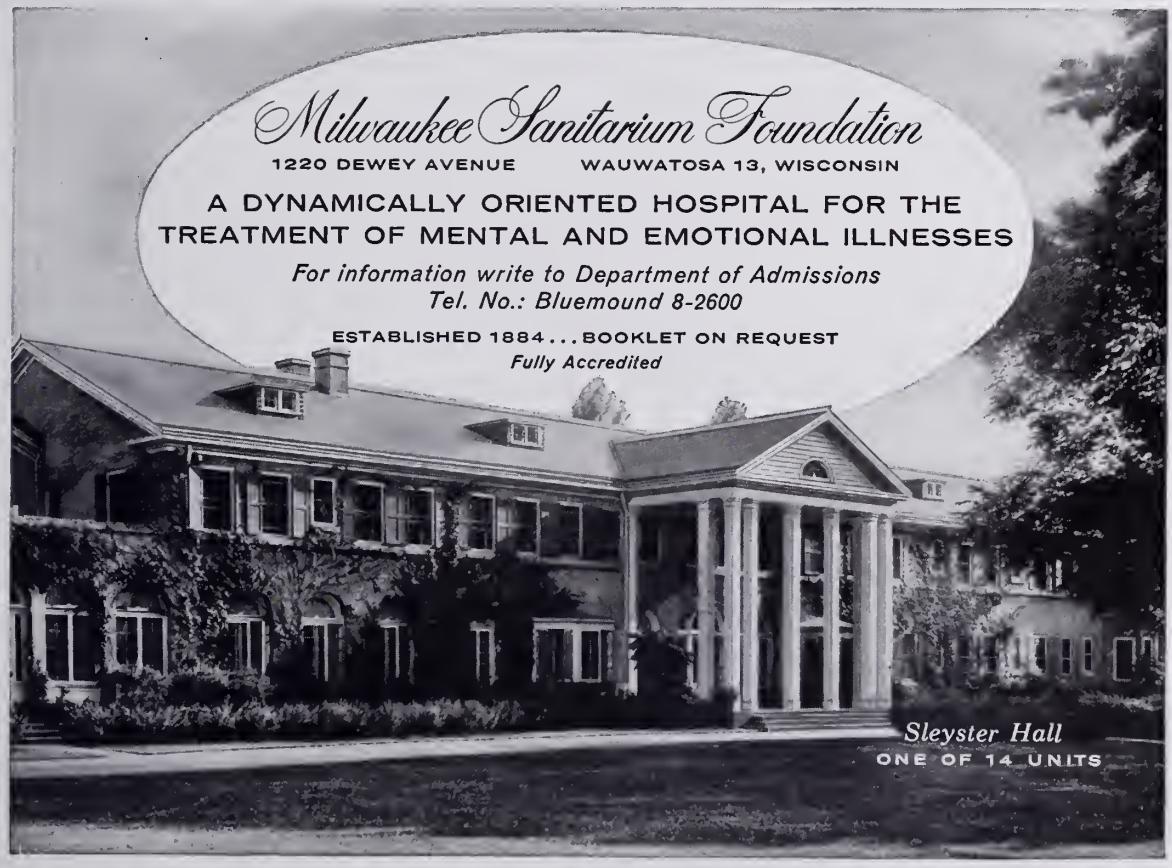
Dr. Milford E. Barnes, Jr., formerly head of the Division of Child Psychiatry in the SUI medical school, assumed his new duties as director of the Des Moines Child Guidance Center on January 1. Prior to his work at SUI, Dr. Barnes spent seven years at child guidance centers in Wilkes Barre, Pennsylvania, and Madison, Wisconsin.

Blue Cross-Blue Shield announces the recent addition of **Mr. Clifford Van Zile** to its professional relations staff. Since 1957 he has been in the Blue Cross-Blue Shield enrollment department. Mr. Van Zile, who lives at 21 Hillside Drive, Oelwein, also has two brothers with Blue Cross-Blue Shield: Herb, in Dubuque, and Bill, in Arizona.



Mr. Clifford Van Zile

Dr. Heinz S. Jacobi, who joined the staff of the Medical Associates in New Hampton on January 1 was born in Berlin, Germany. He attended medical school in Bern, Switzerland, interned in New



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York and took residency training in Des Moines. More recently Dr. Jacobi spent a year as surgeon at the Veteran's Hospital in Topeka, Kansas.

Physicians from 17 states, the District of Columbia and five foreign countries attended the national clinical meeting of the American Society for Surgery of the Hand, January 21 at the SUI College of Medicine. **Dr. Norman B. Nelson,** dean of the SUI College of Medicine, gave the welcoming address, and **Dr. Julian M. Bruner,** of Des Moines, president of the Society, was among the guest speakers. Speakers from SUI were **Dr. R. T. Tidrick,** professor and head of surgery; **Dr. Eugene W. Scheldrup,** professor of anatomy; **Dr. Adrian E. Flatt,** assistant professor of orthopedic surgery; and **Mr. John H. Schulze,** associate professor of art. Demonstrators were **Drs. Abron Grandia, David Murray, Donald B. Kettelkamp, Alan Merchant, John Leabhart,** and **James Hayes,** all resident physicians in the Department of Orthopedics; **Miss Elizabeth Collins,** assistant professor and director of occupational therapy, and **Mr. Paul VerVais,** director of medical art at SUI.

Dr. Wallace W. McCrory, professor and head of the Department of Pediatrics at the SUI College of Medicine, spoke in Miami Beach, Florida, on January 11 at a conference on disease in early life. His subject was "Health of the Child of North America." The conference was held in connection with the dedication of a new building at the Variety Club's Children's Research Foundation there.

Dr. I. V. Ponseti, professor of orthopedic surgery at SUI, spoke Wednesday night, January 13, before the SUI chapter of Sigma Xi, national scientific society. In his talk he described research in which curvature of the spine and other skeletal deformities, and dissecting aneurysms of the aorta have been studied in animals in an attempt to learn more about the cause of such diseases in man. Dr. Ponseti has worked with several members of the biochemistry and chemistry staffs on this problem, and in 1956 received an American Academy of Orthopedic Surgeons award for certain phases of the study.

Two Iowa City doctors will participate in the Sectional Meeting of the American College of Surgeons, to be held in Minneapolis and Rochester, April 11-14. On Monday, April 11, **Dr. Russell Meyers,** professor of neurosurgery at SUI, will speak on the subject "Pathogenesis, Management and Prognosis of Craniocerebral Trauma." His talk will be part of a symposium on the subject of trauma, which will be led by **Dr. Robert T. Tidrick,** professor and head of surgery at SUI.



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Miller, R. F.: Clin. Rev. 1:10 (July) 1958

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General Surgery, One Week, March 7; Two Weeks, May 2
Gallbladder Surgery, Three Days, April 18
Surgery of Hernia, Three Days, April 21
Surgery of Hand, One Week, April 18
Pediatric Surgery, One Week, April 25
Head, Neck and Plastic Surgery, One Week, April 11
Advancements in Surgery, One Week, March 21
Fractures & Traumatic Surgery, Two Weeks, March 21
Proctoscopy & Sigmoidoscopy, One Week, March 28
Femoral Arteriography & Aortography, Four Days, March 29

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Two errors in the January issue of the JOURNAL have been called to the attention of the editors. First, in the item entitled "A Re-evaluation of the Coffee Break," on page 45, a man, **Dr. Jean Spencer Felton** of UCLA, was mistakenly referred to as "she." Second, it was erroneously implied in a Personals item, on page xl, that **Thomas Courtney Wilson,** of Muscatine, is a physician. Rather, according to the JOURNAL'S informant, he is a chiropodist currently selling shoes in his brother's store there.

Dr. William D. Paul, a professor in the Division of Rehabilitation at the SUI College of Medicine, and **Mr. Wendell B. Gibson,** of Des Moines, were presented with distinguished service awards from the National Arthritis and Rheumatism Foundation on Thursday, January 14, at the annual meeting of the Iowa chapter of the organization. The presentations were to have been made by **General George C. Kenney,** USAF (retired), the national president, but weather prevented his arrival and Mr. William Schneider, executive director of the Iowa Foundation substituted for him. At the same meeting Mr. Gibson was re-elected general chairman, and Dr. Paul medical chairman of the Iowa chapter.



Dr. W. D. Paul

A 6 x 18 foot display showing how arthritic hands are rehabilitated through surgery, was unveiled at the meeting. Colored pictures and plastic models demonstrated how surgeons have inserted metal joints for diseased natural joints in the hands. The method is the outgrowth of research carried on with a grant at the SUI College of Medicine under the supervision of **Dr. Adrian Flatt.** The American Medical Association and the American Rheumatism Society have requested use of the display at their next annual conventions.

Dr. Louis T. Palumbo, of Des Moines, spoke at the annual meeting of the Polk County Medical Society on Wednesday, January 20. His subject was "New Surgical Procedure for Angina Pectoris and Vascular Insufficiency of the Upper Extremity."

The February meeting of the Polk County Medical Society will be held at the Hotel Savery, Des Moines, on Wednesday, February 17, at 6:30 p.m. and the speaker will be **Dr. Ralph Moore,** of Omaha.

The February, 1960, meeting of Gamma Chapter, Sigma Theta Tau, national honorary society in

nursing, co-sponsored by the Graduate College of the State University of Iowa, will be held at 8:00 p.m. Thursday, February 11, in the senate chamber, Old Capitol, Iowa City. **Mary Kelly Mullane, R.N., Ph.D.,** dean of the SUI College of Nursing, will speak on "Research and Modern Nursing." This is to be an open meeting to which any interested person is welcome.

Twenty-five pathologists from all parts of Iowa and from several midwestern states attended the annual conference of the Midwest Association of Ophthalmology Pathologists at the SUI College of Medicine on January 16. **Dr. F. C. Blodi,** clinical associate professor of ophthalmology, said the annual meetings, held at a different university each year, provide members of the association an opportunity to discuss difficult diagnostic and treatment problems with colleagues of other institutions. Physicians attending the meeting brought case studies concerning pathology of the eye for discussion. Dr. Blodi and **Dr. Alson E. Braley,** professor and head of ophthalmology at SUI, were co-chairmen of the event.

Dr. S. E. Ziffren, a professor of surgery at the SUI College of Medicine, is author of a newly-published book entitled MANAGEMENT OF THE AGED SURGICAL PATIENT. It includes a chapter on urology by **Dr. R. H. Flocks,** professor and head of urology at SUI, and a chapter on anesthesia contributed by **Dr. S. C. Cullen,** now professor and head of anesthesia at the University of California School of Medicine and formerly chairman of the anesthesiology division at SUI. **Dr. Raymond F. Sheets,** a professor of internal medicine at SUI, contributed a discussion of the cardiac and diabetic patient facing emergency operation, and **Mr. Alan O. Hage,** a member of the University's medical artists staff provided the book's illustrations.

Dr. Norman Miller, professor and head of obstetrics and gynecology at the University of Michigan, presented the Plass Memorial Lecture, Tuesday, January 19, at the SUI College of Medicine. He spoke on "Irradiation Sensitivity of Cervical Cancer." The lecture is presented annually by a prominent scientist in memory of the late **Dr. Everett Plass,** who was professor and head of obstetrics and gynecology at SUI from 1926 to 1952.

Dr. Miller, who was a member of the medical faculty at SUI prior to his move to the University of Michigan in 1931, is also a past president of the American College of Surgeons, the American Gynecological Society, and the Central Association of Obstetrics and Gynecology and former vice-president of the American Board of Obstetrics and Gynecology. He has served as secretary and chairman of the section on obstetrics and gynecology in the American Medical Association, and secre-



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tary of the American College of Surgeons and the American Gynecological Society.

Dr. William C. Eller, of Waterloo, has resigned as chairman of the Relative Value Study Committee of the State Medical Society. He will be replaced in this capacity by **Dr. Fred Sternagel,** of West Des Moines. It has been Dr. Eller's intention to relocate in Fort Lauderdale, Florida, early in February.

Dr. John L. Hoyt, of Creston, was elected chief of staff of the Creston Medical Clinic at its annual meeting Monday, December 7. Elected to serve with Dr. Hoyt on the executive committee for 1960 were **Drs. M. R. Paragas** and **Max E. Richards.**

Dr. John Lear Beattie, a surgeon, joined the staff of the Creston Medical Clinic in mid-January. He received his medical degree and four years of training in general surgery at the University of Nebraska. After completing his residency, Dr. Beattie was assistant chief of surgery at the Veterans Administration Hospital in Omaha and a faculty member at his *alma mater.* He is a diplomate of the American Board of Surgery.

Drs. Thomas J. Meany and **Patrick C. Meekin,** of West Bend, closed their medical offices January 13 and moved to Minneapolis. They had been in West Bend for two years.

Dr. and Mrs. E. A. Larsen, of Centerville, were injured in an auto accident January 10 while en route to Des Moines for a State Society meeting. Mrs. Larsen suffered a broken right leg and extensive soft tissue damage. Dr. Larsen suffered minor injuries, and is able to be about.

Dr. John S. Hooley, of Sigourney, was appointed city physician and health officer at a city council meeting on Wednesday, January 6.

Dr. Frederick E. Mohs, associate professor of chemosurgery and director of the Chemosurgery Clinic at the University of Wisconsin, was guest speaker at the Woodbury County Medical Society meeting, Thursday, January 28, at the Jackson Hotel in Sioux City. Dr. Mohs spoke on "Chemosurgery: A New Method for Microscopically Controlled Excision of External Cancer."

DEATHS

Dr. Albert E. Ady, 63, of West Liberty, died on December 19 following a long illness.

Dr. Dean H. Osburn, 77, a former Kalona doctor, died Friday, December 25 in Klamath Falls, Oregon after a lingering illness.

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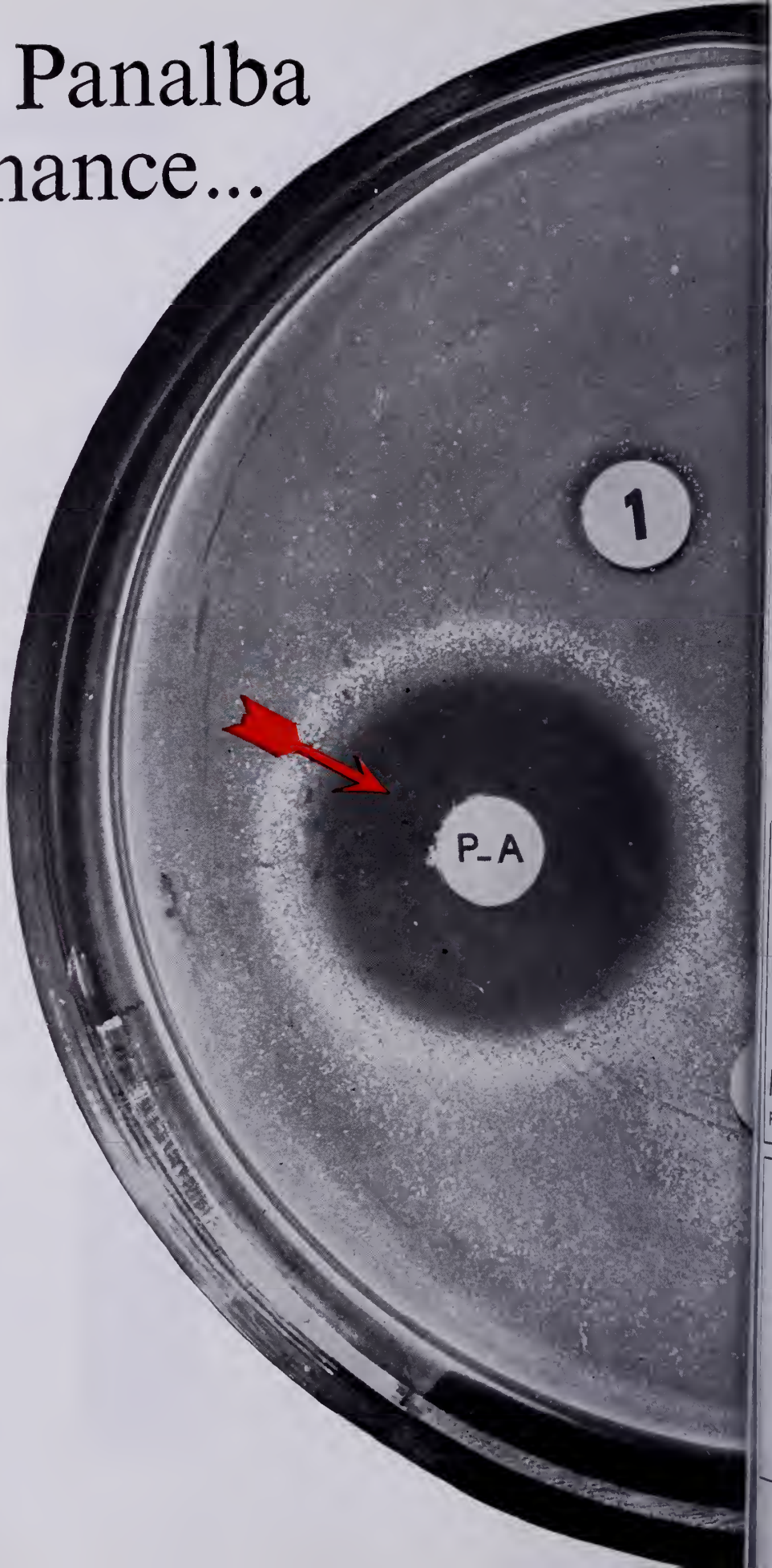
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The Chicago Medical Society's Annual Clinical Conference

Palmer House, March 1, 2, 3 and 4, 1960

Tuesday, March 1

8:30 a.m. "Some Observations on the Localizing Patterns of Arteriosclerosis"—Dr. Michael E. DeBakey, professor of surgery, Baylor University

9:00 "Complications of Peptic Ulcer" (Speaker to be announced)

9:30 "Modern Concepts of Malignancy of the Thyroid"—Dr. John Beach Hazard, pathology, Cleveland Clinic Foundation

11:00 "Pharmacological Depression in the Course of Essential Hypertension"—Dr. John I. Nurnberger, professor of psychiatry, Indiana University Medical Center

11:30 "Recognition and Management of Hearing Loss"—Dr. Howard P. House, chairman of otolaryngology, U. of Southern California

1:30 p.m. "What Has Been Learned From Renal Biopsy"—Dr. Robert M. Kark, professor of medicine, University of Illinois

2:00 "Diagnosis and Surgical Management of Kidney Disease"—Dr. Eugene F. Poutasse, urology, Frank E. Bunts Institute

2:30 "Inflammatory Disease of the Intestine"—Dr. Thomas E. Machella, medicine, University of Pennsylvania

4:00 "Office Management of Certain Anorectal Lesions"—Dr. Raymond J. Jackman, proctology, Mayo Clinic

4:30 CLINICOPATHOLOGIC CONFERENCE—Dr. Hazard, moderator

Wednesday, March 2

8:30 a.m. "Choice of Operations on Peptic Ulcer"—Dr. Robert J. Coffey, professor of surgery, Georgetown School of Medicine

9:00 "Pyelonephritis"—Dr. Edward H. Kass, associate professor of bacteriology, Harvard University

9:30 "Dissolution of Clots by Intravenous Therapy"—Dr. Sol Sherry, professor of Medicine, Washington University, St. Louis

11:00 "The Use of Progestational Agents in the Treatment of Functional Uterine Bleeding"—William M. Allen, professor of obstetrics and gynecology, Washington University, St. Louis

11:30 "Psychosomatic Aspects of General Medical Disorders"—Dr. Thomas H. Holmes, professor of psychiatry, U. of Washington, Seattle

1:30 p.m. "Management of Metastatic Tumors of the Lung"—Dr. O. T. Clagett, surgery, Mayo Clinic

2:00 "Relation of Salt to Hypertension"—Dr. John M. Weller, associate professor of medicine, University of Michigan

2:30 "Secondary Malabsorption Syndrome: Diag-

(Continued on page lxviii)

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nosis and Management"—Dr. William G. Sauer, medicine, Mayo Clinic

4:00 PANEL DISCUSSION: "Control and Spread of Cancer"

6:00 FELLOWSHIP HOUR AND DINNER

Thursday, March 3

8:30 a.m. "Diagnosis and Management of Intra-epithelial Cervical Cancer"—Dr. William F. Mengert, professor of obstetrics and gynecology, University of Illinois

9:00 "The Clinical and Laboratory Recognition of Drug-Induced Hemolytic Anemias"—Dr. William H. Zinkham, assistant professor of pediatrics, Johns Hopkins University

9:30 "Management of Heart Failure"—Dr. L. Feldman, associate professor of medicine, University of Illinois

11:00 "Oral Agents in the Treatment of Diabetes"—Dr. Leo P. Krall, Joslin Clinic

11:30 "Hypogammaglobulinemia"—Dr. Horace H. Zinneman, associate professor of medicine, University of Minnesota

1:30 p.m. "Fluid and Electrolyte Problems"—Dr. Peter J. Talso, professor of medicine, Loyola University

2:00 "Physiologic Considerations in the Treatment of Graves' Disease"—Dr. Rulon W. Rawson, chief of clinical investigation, Sloan-Kettering Institute and professor of medicine at Cornell University

2:30 "Diagnosis of Anemias"—Dr. Clement A. Finch, professor of medicine, University of Washington, Seattle

4:00 PANEL DISCUSSION: "Reactions to Drugs"

Friday, March 4

8:30 a.m. "Intestinal Obstruction in the Newborn"—Dr. H. William Chatsworthy, Jr., associate professor of pediatric surgery, Ohio State University

9:00 "Pitfalls in Pediatric Anesthesia"—Dr. M. Digby Leigh, associate professor of surgery (anesthesia) at the U. of Southern California

9:30 "Pancreatitis"—Dr. Richard H. Egdahl, assistant professor of surgery at the Medical College of Virginia

11:00 "Airspace Disorders of the Lung"—Dr. Edward A. Gaensler, surgery, Boston

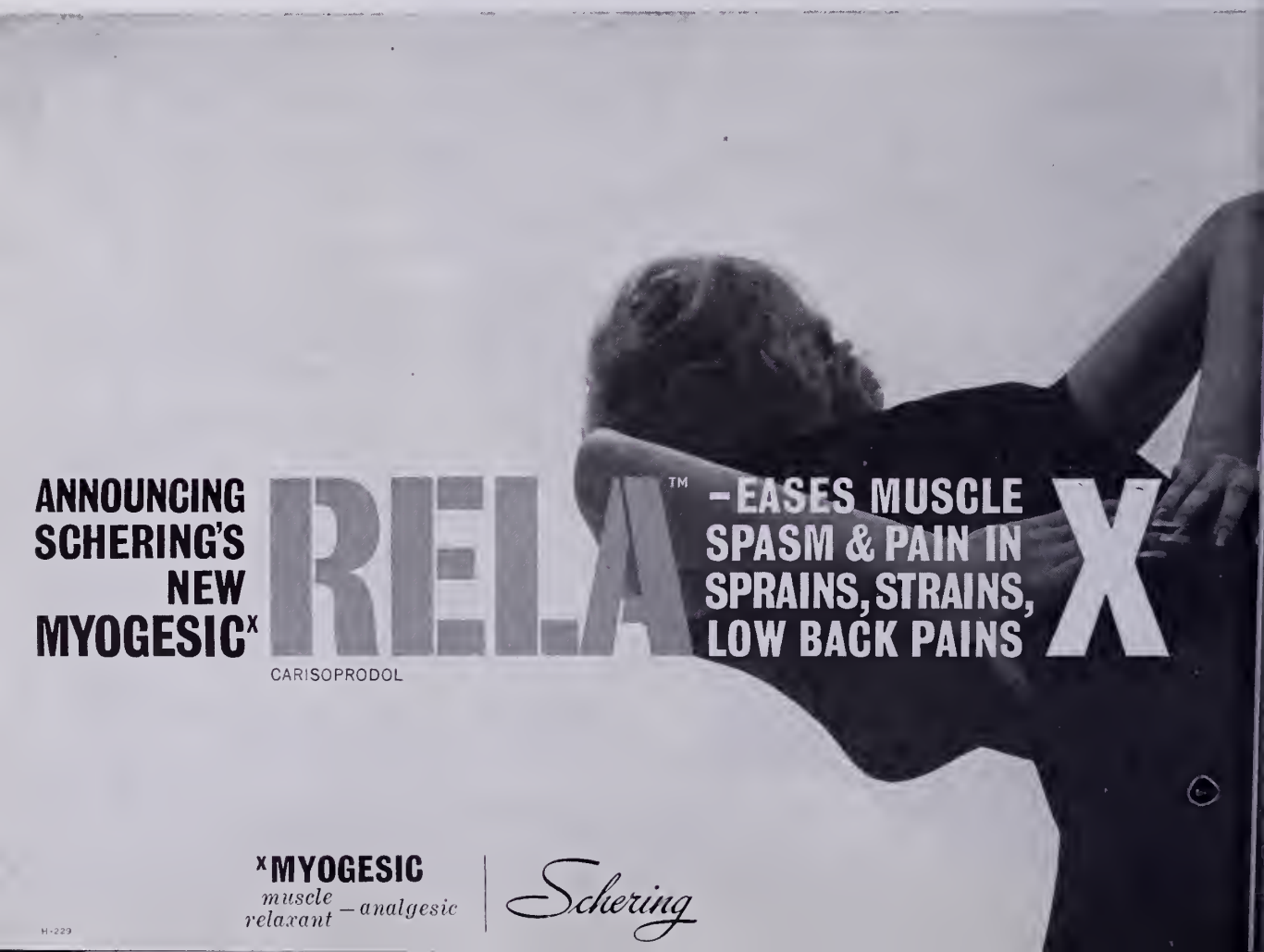
11:30 (To be announced)

1:30 p.m. "Collagen Diseases of the Skin"—Dr. Louis A. Brunsting, dermatology, Mayo Clinic

2:00 "Surgical Management of Pulmonary Disorders"—Dr. Peter V. Moulder, associate professor of surgery at the University of Chicago

2:30 "Management of Psychiatric Problems of the Aged"—Dr. Jack Weinberg, clinical associate professor of psychiatry, University of Illinois

In addition, there will be closed-circuit television programs, on the afternoon of each day, on "The Aching Back," "Clinical Endocrinology," "Office Gynecology" and "Hypertension." Entertainment will be provided for the wives of doctors who attend. The registration fee will be $10.



OPERATING ROOM TECHNICIANS HELP RELIEVE NURSE SHORTAGE

For the ninth consecutive year, the surgical nursing staff at the S.U.I. College of Medicine will conduct on-the-job training programs in 1960 for operating-room technicians. A new group of technicians, selected from candidates applying for the positions, began training last month.

With special training and supervision, these people are helping University Hospitals cope with one of the nation's major nursing problems—a shortage of nurses to serve on surgical teams. Dr. R. T. Tidrick, professor and head of surgery at S.U.I., says operating-room technicians have been used at S.U.I. for eight years "with gratifying success." Hospitals in many parts of the country are turning to the technician plan as a means of easing the nurse shortage.

The technician provides the surgical team with assistance like that which is provided by nurses' aides in hospital wards, but the rigid sterile requirements of an operating room demand special training and orientation for the O-R technician. Duties performed by the technician remain the responsibility of the nursing staff, but the technician carries them out under the nurses' supervision, thus permitting nurses to devote more of their own efforts to helping the surgeon and caring for the patient.

After several months of training and orientation to the demands that fall upon all operating-room personnel, the technicians begin scrubbing alongside the nurses and performing such duties as opening sterile packs of materials, sterilizing selected instruments, helping drape patients, assembling equipment for the anesthesiologist, helping adjust lights during the operation and preparing the operating room for the following surgical case.

Miss Marie Tener, director of nursing service at S.U.I., says, "We look for candidates, either men or women, who have a high school education (or its equivalent), who are at least 18 years of age, who have a genuine feeling of kindness for other persons, who have good manual skills, who are emotionally stable, whose memory is good, who are strong and healthy, and who are interested in serving at least two years in the position."

Training of technicians at S.U.I. begins with some basic instruction in anatomy and professional ethics, and with group demonstrations and apprentice-type observation of technicians who are already trained. The training continues through three months of instruction and closely supervised work.

In 1958, the American Hospital Association published an instructor's manual for use by nurses who are to teach operating-room technicians.

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HEARING IMPAIRMENT

It does not seem to be generally appreciated that a large degree of hearing impairment exists in our population. The National Health Survey indicates that there are about 5,800,000 people in the United States with some degree of hearing impairment; of this total nearly 110,000 are totally deaf. Hearing difficulties are more common among males than among females. Forty out of every 1,000 males are reported to have impaired hearing, a rate one third higher than that for females. The higher prevalence rate among males reflects their more frequent involvement in accidents and their greater exposure to prolonged intense noise in industry.

In 1957, says the STATISTICAL BULLETIN,* some indication of the extent of seriously impaired hearing among children is available from data regarding persons under age 21 who received care for this condition under the Crippled Children's Program of the Social Security Act. In that year, more than 17,000 children received physicians' services for impaired hearing in 28 states which included these conditions in their programs.

Much can be done to correct hearing impairments and to prevent deafness. Many of the hearing difficulties at the younger ages result from infection or accidents; these difficulties can be diagnosed and treated early. A nationwide program for the detection of hearing loss among school-age children, coupled with measures for medical referral and follow-up, might accomplish much in reducing or at least ameliorating hearing impairments. The considerable research now being done on the relation of infection in the mother during the first months of pregnancy to congenital anomalies may throw light on the origin of some hearing impairments present at birth.

Relatively few comprehensive studies are available on the effects of noise in industry. The relation of hearing loss to noise exposure has not yet been evaluated to permit the setting of a safe level of noise exposure in industry. Further research is needed in this field.

Greater efforts should be made toward motivating people with hearing impairments to seek early medical attention. Hearing should be checked as a part of periodic health examinations for people at every stage of life. This would permit not only better treatment but also more effective rehabilitation with suitable hearing aids where indicated. In recent years, surgery has improved hearing for many people in middle and later life afflicted with chronic progressive deafness.

It may be anticipated that in the course of time better aids to hearing as well as further studies in physiology and newer developments in surgical technics may improve the prospects for the hard of hearing.

—Editorial, NEW YORK STATE JOURNAL OF MEDICINE, **60**:199-200, (January 15) 1960.

* STATISTICAL BULLETIN, Metropolitan Life Insurance Company, October, 1959, p. 7.

Journal of the IOWA STATE MEDICAL SOCIETY

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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



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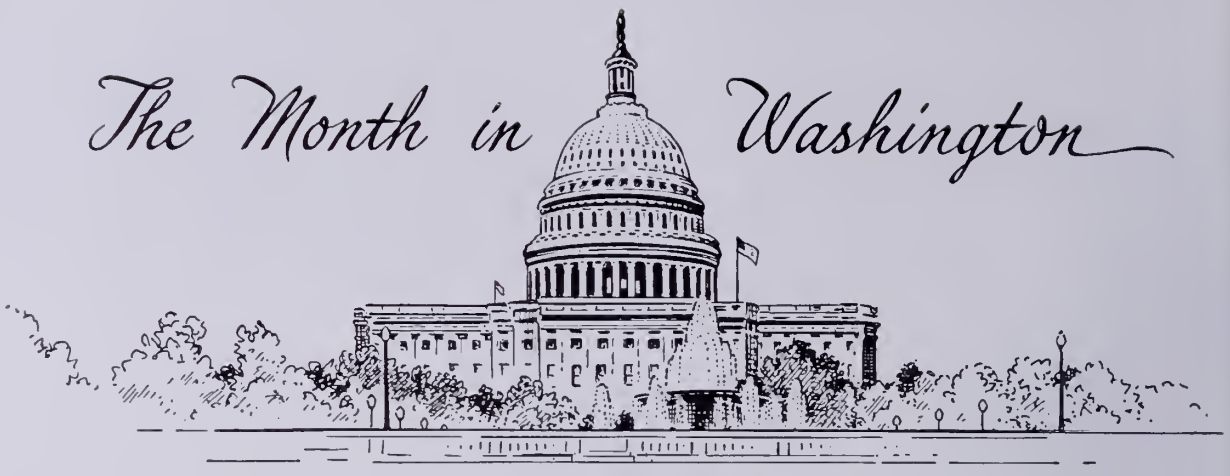
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The Month in Washington



Washington, D. C.—Congress appears headed for a showdown this session on legislation for the federal government to provide medical care for aged persons.

The medical profession and allied groups stepped up their activities in opposition to such legislation as indications mounted that the issue was approaching a crucial stage. Several state medical societies planned to send delegations to Washington to express their opposition to their Congressmen personally.

Pressure behind such legislation began to build up early in February.

The Eisenhower Administration announced it was working on three possible programs for providing health care for aged persons in cases of catastrophic—lengthy and costly—illness.

Without amplification, President Eisenhower told a news conference that there was under consideration "a possible change" in the Social Security Act "to run up the taxes by a quarter of a per cent to . . . make greater provision for the care of the aged." The President's statement that "there has been no conclusion reached in the administration" was backed up by Arthur S. Flemming, secretary of Health, Education and Welfare, in a clarifying announcement.

Flemming said his Department was working on two other approaches to what he called a serious problem, in addition to the possible revision of the Social Security law mentioned by Mr. Eisenhower. The HEW secretary said consideration also was being given to: (1) stepped-up federal assistance under the federal-state public assistance program, and (2) the federal government's supplementing voluntary insurance programs.

Flemming again expressed opposition to the Forand Bill, which would increase Social Security taxes by one quarter of one per cent each on employers and employees to provide hospitalization, surgical benefits and nursing home care for Social Security beneficiaries. The secretary said he wanted to "underline that the position of the administration is opposition to the Forand Bill."

Flemming said he hoped to have an administration bill ready to submit in early April to the House Ways and Means Committee, where the Forand Bill is pending. The Committee is scheduled to take up proposed changes to the Social Security Act in late March or early April.

Proponents of the Forand Bill—which is vigorously opposed by the American Medical Association and allied groups—were pointing their campaign toward securing the House Committee's approval of the legislation at that time.

The AFL-CIO, a main supporter of the Forand Bill, urged labor union members to write to congressmen on the Committee asking them to vote for it. The AFL-CIO also distributed a pamphlet quoting a handful of physicians as supporting the legislation. But the labor organization didn't mention that the overwhelming majority of doctors oppose it.

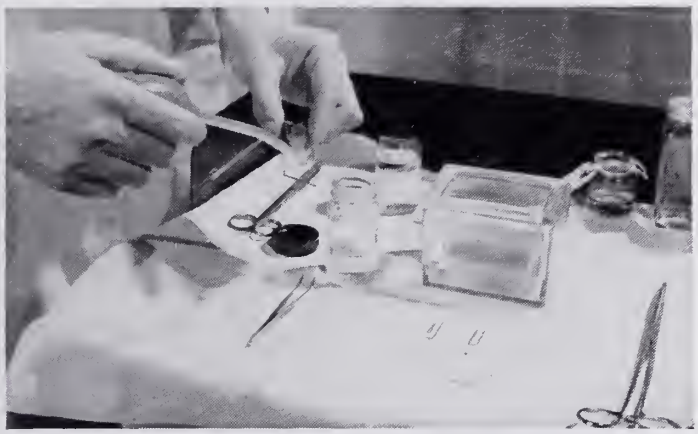
The Senate Subcommittee on Problems of the Aged and Aging, headed by Sen. Pat McNamara (D., Mich.), issued a report on behalf of its Democratic majority, stating that use of the Social Security program "is the most efficient procedure for providing" health care for older persons.

The AMA and the Subcommittee's Republican minority promptly disputed this conclusion. An AMA statement issued in Chicago said: "The American Medical Association today sharply disagreed with the recommendation of the McNamara Subcommittee regarding government medicine for Social Security beneficiaries.

"Dr. Louis M. Orr, Orlando, Florida, president of the AMA, said: 'This is a politically inspired committee. Senator McNamara, Democrat from Michigan, has long supported political medicine. The fact is that at the seven subcommittee hearings held throughout the United States, observers







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heard little support expressed by the older citizens who attended the hearings for government medicine financed by additional taxes and administered through Social Security.'"

The Republican minority stated that testimony before the Subcommittee "proves that it is possible for elderly people to secure private insurance to provide hospitalization and surgical benefits without any intervention by public authorities."

Sen. John F. Kennedy (D., Mass.), a leading contender for the Democratic nomination for President, introduced legislation similar to the controversial Forand Bill, but broader in scope. The Kennedy Bill would eliminate surgical benefits, but would add diagnostic outpatient and home nursing services.

FEDERALITIS

In our professional preoccupation with medical ills, we have overlooked our nation's number-one malady—"federalitis." This is a disease in which the civic body has an insatiable craving for revenues, exceeded in intensity only by an intemperate desire to spend. There is an accompanying hallucination that the mere existence of a problem demands its solution by the national government.

In the last 30 years:

Our federal government has operated in the red in 24 years, or 80 per cent of the time;

Our federal spending and tax collections have increased more than 25-fold;



Life memberships in the Polk County Medical Society were conferred on two doctors at the organization's annual meeting Wednesday evening, January 20 at the Des Moines Golf and Country Club. Honored in recognition of 50 years of medical practice were Dr. Tom B. Throckmorton (right) and Dr. Julius S. Weingart (left), both of Des Moines. Dr. Throckmorton has been a member of the Polk County Medical Society since 1912, and was its president in 1952. He was secretary of the State Medical Society from 1916 to 1930. He is still active in the practice of his specialty, neurology and psychiatry. Dr. Weingart is chief pathologist at Iowa Lutheran Hospital and has been director of that hospital's pathology department since 1937. He was chief of staff at Broadlawns General Hospital from 1927 to 1937, and has continued since then as a member of the consulting staff. A member of the Polk County Medical Society since 1914, Dr. Weingart was a trustee of the society in 1931 and chairman of the board in 1932. Dr. William B. Chase (center), a long-time Des Moines physician, was chosen last April as the ISMS General Practitioner of the Year. He is holding a citation presented to him by the Polk County Society in commemoration of that selection.

Our federal public debt has increased $270,000,000,000;

Our daily lives have been encroached upon and made less free by government bureaucracy;

Our nation's security has been impaired by tragic ineptness in the conduct of our foreign affairs;

Our state and local governments have been joined with the federal government in vain attempts to spend us rich, smart and secure.

Our existing national debt requires annual carrying charges of $9,000,000,000. This item constitutes the largest single non-defense-related item in our federal budget. That $9,000,000,000 is more than the combined federal, state and local taxes paid by all the businesses and individuals in the State of Pennsylvania. We have now reached the point where we cannot wait until it is convenient to start paying our own way. It is urgent that we achieve budgetary surpluses so that sustained program of debt reduction can be accomplished.

This onerous public indebtedness has been created despite the imposition of unprecedented tax burdens on our free-enterprise society. In regard to taxes, we have reached the point where federal, state and local tax collections take one-third of our net national product. Thus, we have gone one-third of the route toward the total socialization of the economic endeavors of our citizens.

Historians tell us that no great nation has ever been conquered from without until it has first destroyed itself from within. Too often social legislation has been for the benefit of an organized, vocal minority. Too often we have acted in too great haste. Too often we have overlooked the fact that the government can give to the people only that which it has first taken away from them.

So what do we do? First, I propose that as individuals we inform ourselves of the facts and then inform others. If the American people know the truth, they will not fall prey to the demagogue. Second, I propose that we work individually in behalf of the principles of government in which we believe, and in behalf of candidates who stand for those principles. We have been free with our criticism, but too frugal with our help. Third, I propose that our county medical societies carefully consider the establishment of government affairs committees. It would be the duty of these groups to inform their societies of governmental matters of interest to their memberships, and to outline programs whereby the medical practitioner can become a more influential voice in behalf of sound American government.

Finally, in closing, let me remind you of the words of the Italian poet Dante who more than 700 years ago said, "The hottest places in Hell are reserved for those who, in a period of moral crisis, maintain their neutrality."

—Adapted from "Citizenship," an address by Joseph C. Hatch, M.D., to the Cambria County Medical Society, Johnstown, Pennsylvania, January 14, 1960.



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Louisa			E. S. Groben, Columbus Junction
Lucas	R. C. Gutch, Chariton	R. E. Anderson, Chariton	A. L. Yocom, Chariton
Lyon	H. H. Gessford, George	S. H. Cook, Rock Rapids	S. H. Cook, Rock Rapids
Madison	J. E. Evans, Winterset	R. W. Carson, Winterset	J. E. Evans, Winterset
Mahaska	R. E. Phelps, New Sharon	D. K. Campbell, Oskaloosa	R. L. Alberti, Oskaloosa
Marion	Yme Sloterdyk, Knoxville	D. H. Hake, Knoxville	D. H. Hake, Knoxville
Marshall	H. E. Sauer, Marshalltown	D. S. Reading, Marshalltown	R. C. Carpenter, Marshalltown
Mills	W. A. De Young, Glenwood	M. L. Scheffel, Malvern	M. L. Scheffel, Malvern
Mitchell	T. G. Walker, Riceville	W. A. Spencer, Osage	T. E. Blong, Stacyville
Monona	L. A. Gaukel, Onawa	W. P. Garred, Onawa	L. A. Gaukel, Onawa
Monroe	F. N. Bay, Albia	D. N. Orelup, Albia	D. N. Orelup, Albia
Montgomery	S. D. Poore, Villisca	S. R. Smith, Red Oak	H. C. Bastron, Red Oak
Muscatine	J. H. Spencer, Muscatine	K. H. McKay, Muscatine	K. E. Wilcox, Muscatine
O'Brien	J. E. Dahlbo, Sutherland	A. D. Smith, Primghar	E. B. Getty, Primghar
Osceola	J. H. Thomas, Sibley	F. B. O'Leary, Sibley	
Page	K. A. Catlin, Clarinda	K. V. Jensen, Clarinda	K. J. Gee, Shenandoah
Palo Alto	H. R. Powers, Emmetsburg	L. C. Wigdahl, Emmetsburg	H. L. Brereton, Emmetsburg
Plymouth	F. D. Christensen, Remsen	F. C. Bendixen, Le Mars	R. J. Fisch, Le Mars
Pocahontas	C. J. Smith, Gilmore City	H. L. Pitluck, Laurens	C. L. Jones, Gilmore City
Polk	R. A. Dorner, Des Moines	V. L. Schlaser, Des Moines	J. G. Thomsen, Des Moines
Pottawattamie	F. H. Beaumont, Council Bluffs	G. V. Caughlan, Council Bluffs	G. H. Pester, Council Bluffs
Poweshiek	R. E. Sparks, Lynnville	E. S. Korfmacher, Grinnell	S. D. Porter, Grinnell
Ringgold	D. E. Mitchell, Mt. Ayr	J. W. Hill, Mt. Ayr	
Sac	John Hubiak, Odebolt	Gene E. Michel, Sac City	J. W. Gauger, Early
Scott	C. M. Zukerman, Davenport	A. B. Hendricks, Davenport	Erling Larson, Davenport
Shelby	W. S. Markham, Harlan	D. W. Dohnalek, Harlan	J. H. Spearing, Harlan
Sioux	Alexander Bushmer, Orange City	A. L. McGilvra, Sioux Center	M. O. Larson, Hawarden
Story	K. S. Sun, Ames	J. F. Bacon, Ames	J. D. Conner, Nevada
Tama	C. W. Maplethorpe, Sr., Toledo	A. J. Havlik, Tama	A. J. Havlik, Tama
Taylor	R. W. Boulden, Lenox	G. W. Rimel, Bedford	R. W. Boulden, Lenox
Union	D. L. York, Creston	H. J. Peggs, Creston	H. J. Peggs, Creston
Van Buren	Kiyoshi Furumoto, Keosauqua	J. T. Worrell, Keosauqua	Kiyoshi Furumoto, Keosauqua
Wapello	L. J. Gugle, Ottumwa	R. A. Hastings, Ottumwa	L. J. Gugle, Ottumwa
Warren	L. W. Porter, Indianola	R. C. McGeehon, Indianola	C. A. Trueblood, Indianola
Washington	T. M. Mast, Washington	E. J. Vosika, Washington	G. E. Montgomery, Washington
Wayne	C. F. Brubaker, Corydon	J. H. McCall, Allerton	D. R. Ingraham, Sewal
Webster	D. G. Bock, Fort Dodge	J. F. Kelly, Fort Dodge	C. J. Baker, Fort Dodge
Winneshiek	D. W. Wright, Decorah	J. A. Bullard, Decorah	E. F. Hagen, Decorah
Woodbury	J. M. Krigsten, Sioux City	D. E. Howard, Sioux City	D. B. Blume, Sioux City
Worth	R. L. Olson, Northwood	W. G. McAllister, Manly	C. T. Bergen, Northwood
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Personals



Dr. Cecil W. Seibert, of Waterloo, was guest speaker at the monthly dinner meeting of the Black Hawk Association of Medical Assistants in Waterloo, on January 14. He spoke on "Our State Medical Society, Its Composition, Purposes and Duties." He also discussed the Forand Bill.

For the first time in at least 20 years, **Dr. Walter L. Bierring**, of Des Moines, did not go to the American Medical Association mid-winter meeting which was held at Dallas, Texas. The 91-year-old doctor was ailing. He was so much missed that AMA officials called Des Moines to find out the cause of his absence. He has since recovered and resumed his work at the State Health Department.

Dr. Richard E. Shope, son of the late **Dr. C. C. Shope**, of Des Moines, has been credited with becoming the first living human being whose blood yielded viruses of deadly eastern equine encephalitis. He recovered without apparent ill effects from the disease for which there is no known cure. Dr. Shope is a graduate of the SUI College of Medicine and has been with the Rockefeller Institute for Medical Research since 1952. He contracted the disease while doing research in an encephalitis epidemic last October, but recovered in about 10 days.

Dr. Ian M. Smith, assistant professor in the Department of Internal Medicine, State University of Iowa, was the principal speaker at the Johnson County Medical Society meeting in Iowa City on Wednesday, February 3. His topic was "Bacterial and Viral Diseases and Their Treatment."

The Black Hawk County Medical Society will meet at the Elks' Club in Waterloo on March 15 at 6:30 p.m. This meeting is to be ladies night with the Auxiliary invited. The speaker will be Miss Eulah Purdy who will speak and show slides on her experiences in an African mission.

The Woodbury County Medical Society meeting will be held Thursday, March 24 in Sioux City. At this meeting Dr. Otto Wurl, of Omaha, will speak on "Hypertension."

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Dr. Robert M. Johnson has entered the practice of general surgery with offices in the Royal Union Building in Des Moines. For the past four years he has been resident in general surgery at Veterans Hospital in Des Moines and for three years prior to that, he was in general practice in the city with the late **Dr. E. T. Scales.** Dr. Johnson is a graduate of Coe College and the SUI Medical School. His internship was at Broadlawns-Polk County Hospital.

About 20 persons from the State Departments of Mental Health, Welfare, Public Health and Public Instruction along with representatives of the clergy and other private groups, attended a special Governor's Conference in Des Moines on January 19. The Governor proposed a commission to study the problems of alcoholism and make recommendations to the 1961 State Legislature for the purpose of drafting immediate and long-range plans for handling alcoholics. **Dr. Paul Huston,** director of the Iowa State Psychopathic Hospital, Iowa City, outlined a priority program for treatment of alcoholics. He recommended that first priority be given to the estimated 2,000 to 3,000 alcoholics who are chronic police cases and need medical attention. Second priority, he recommended, should be given less-frequent offenders who have rehabilitation possibilities, and third priority should be given to a clinic program for the estimated 8,000 to 10,000 alcoholics who do not become police cases. The conferees were informed that alcoholism clinics are to be opened at the State Mental Health Institute at Independence and the State Psychopathic Hospital at Iowa City within a month.

Dr. Joseph V. Meigs, clinical professor of gynecology at the Harvard University school of medicine, lectured on February 4 and 5 at the SUI College of Medicine as the first "Randall Visiting Professor." The visiting professorship was established in memory of the late **Dr. John H. Randall,** who was professor and head of the Department of Obstetrics and Gynecology at SUI prior to his death last spring. The program is supported by the John H. Randall Memorial Fund, which consists of contributions from his friends and colleagues. Dr. Meigs, for whom Meigs' syndrome is named, is an international authority on genital malignancies and endometriosis. He is a regent of the American College of Surgeons and a fellow of England's Royal College of Obstetricians and Gynecologists.

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Dr. John W. Eckstein, an assistant professor of internal medicine at SUI, is one of a group of independent research scientists who recently received grants-in-aid made by the Tobacco Industry Research Committee. Grants are made yearly to scientists undertaking new research projects approved by its Scientific Advisory Board. Dr. Eckstein's project is entitled "Foot Blood Flow Responses to Smoking in the Presence of Hyperlipemia and Hypertension."

Dr. Samuel J. Fomon, an associate professor of pediatrics at the SUI College of Medicine, spoke at the annual meeting of the National Dairy Council in Chicago on January 25. His topic was "New Approaches to Infant Feeding."

Dr. James O. Cromwell, state director of mental health, commented on changes in cost per patient and on the decreased population in Iowa mental health institutes, at a community conference at the Des Moines County Home on January 20. The conference was attended by about 60 persons including representatives of the county board of supervisors, Burlington city council and county welfare department, and the state board of control, Vocational Rehabilitation Division and State Employment Service. Dr. Cromwell stated that the 12-fold increase in daily cost per patient in Iowa mental health institutes has resulted in better care and more discharges of mental patients. The state's four mental institutions have their lowest population in decades, totaling about 4,000 patients now. Dr. Cromwell also attributed this lowered population to a change in philosophy. From using the mental hospitals for custodial care only, the medical staffs now employ them for treatment and discharge of patients. The population is lower despite a big increase in the numbers of patients admitted to the hospitals, he said.

At the same meeting **Dr. Wayne Brown,** superintendent at the Mount Pleasant Institute, was given a certificate of appreciation for his work in mental health by the Burlington Mental Health Center.

Dr. Robert L. Todd, who has practiced in Burlington since 1953, has been selected for inclusion in the 1960 edition of AMERICAN MEN OF MEDICINE, a biographical encyclopedia. The volume will include leading physicians, surgeons, medical educators and hospital administrators of the United

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Gallbladder Surgery, Three Days, April 18
Surgery of Hernia, Three Days, April 21
Surgery of Hand, One Week, April 18
Pediatric Surgery, One Week, April 25
Internal Medicine, Two Weeks, May 2
Board of Surgery Review, Part II, Two Weeks, May 16
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States and Canada. Dr. Todd, a specialist in internal medicine, was also recently made a fellow of the American College of Cardiology. He is chairman of the departments of electrocardiography at Burlington, Mercy and St. Francis hospitals.

Dr. L. B. Williams was elected president of the medical staff of the Jackson County Public Hospital at a staff meeting Friday, January 22. **Dr. O. L. Frank** was named vice-president and **Dr. Paul F. Brown,** secretary-treasurer. All three men practice in Maquoketa.

In a speech before the AMA Annual Congress on Medical Education and Licensure, in Chicago on February 8, **Dr. Raymond Bunge,** a professor of urology at the SUI College of Medicine, challenged predictions that science will "gobble up" the humanities. Referring specifically to recent and anticipated advances in the use of electronic diagnostic instruments, he rejected the predictions of medical satirists that the physician of the future may step aside and let the robot do his work for him. "Instead of 'de-humanizing' the doctor-patient relationship, the new mechanics in medicine may produce a paradox of a sort," Dr. Bunge said, "because the new highly-trained and finely-equipped physician, instead of becoming less and less the 'horse and buggy' doctor personality which everyone admired, may find time to apply some of the horse and buggy type of psychology which worked so well within its limits. The new doctor may be able to achieve something of the same type of doctor-patient relationship as the horse and buggy doctor, and offer his patients all the modern benefits of medical science, too."

Dr. R. T. Tidrick, of Iowa City, was among the speakers on the Thursday, February 4 program at the Clinical Congress of Abdominal Surgeons, February 1-5 in Miami Beach, Florida. He spoke on "Operations for Correction of Congenital Biliary Atresia." At the same 5-day Congress **Dr. Leo H. Kuker,** chief of surgery at St. Anthony's Hospital, Carroll, was one of the panelists in a discussion of surgery of gastric and duodenal ulcer.

Color films of actual open heart operations performed at the SUI hospitals in Iowa City were shown in the Primghar High School auditorium the evening of February 1. **Dr. J. W. Ehrenhaft,** chairman of the Division of Thoracic Surgery at SUI, narrated the films of operations he performed. One film exhibited an operation performed on a

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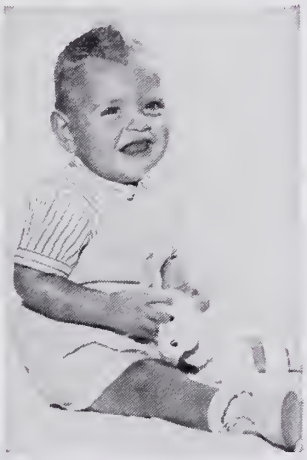
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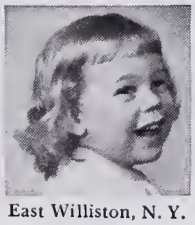
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child kept alive during the heart operation by means of the artificial "heart-lung" machine. The other film demonstrated the technic of hypothermia.

Dr. Russell Meyers, professor of neurosurgery at SUI, will not speak April 11 at the Minneapolis Sectional Meeting of the American College of Surgeons, as originally planned. His place in the symposium on trauma led by **Dr. Robert T. Tidrick**, of SUI, will be taken by **Dr. Harold F. Buchstein**, of Minneapolis.

Dr. E. B. Wilcox, of Oskaloosa, sustained a severely lacerated right hand in an auto accident which occurred Sunday, January 17. The car in which he was riding went out of control on the packed snow, slid backwards down a steep bank and came to rest against a tree. Dr. Wilcox's injuries were the result of being pinned between the open door of the car and the tree.

Dr. J. E. Dahlbo, of Sutherland, was elected president of the O'Brien County Medical Society at its annual meeting on January 18. Other new officers are **Dr. C. Maris**, of Sanborn, vice-president, and **Dr. A. D. Smith**, of Primghar, secretary.

Dr. Peter G. S. Beckett, assistant director of the Lafayette Clinic, in Detroit, spoke at the SUI Psychopathic Hospital on Saturday, February 6. His discourse on the epidemiological approach to medicine in general and the application of this approach specifically to the field of mental illness was transmitted via a two-way telephone hookup to Iowa's five mental institutions at Cherokee, Clarinda, Independence, Mt. Pleasant and Woodward. Psychiatrists and other mental health personnel at the institutions who could not attend the Iowa City meeting were thus enabled to ask questions of, and participate in discussions with, Dr. Beckett and members of SUI's psychiatric staff.

Dr. Julian M. Bruner, of Des Moines, retiring president of the American Society for Surgery of the Hand, was elected a member of the Council at the 15th annual meeting of that Society in Chicago on January 23.

Dr. Ray A. Fox, of Charles City, has accepted an appointment as industrial physician for Dr. Salsbury's Laboratories there, effective February 1. Dr. Fox has practiced in Charles City for 30 years.



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References: 1. Wright, W. W.: Microbiology Report to Bristol Laboratories Inc. 2. Morigi, E. M. E.; Wheatley, W. B., and Albright, H.: Paper presented at the Seventh Antibiotic Symposium, November 4-6, 1959, Washington, D.C. 3. Editorial: New England J. Med. **261**:305 (Aug. 6) 1959. 4. King, A.: Lancet **1**:651 (March 29) 1958. 5. Epstein, E.: J.A.M.A. **169**:1055 (March 7) 1959. 6. Eagle, H. and Musselman, A. D.: J. Bact. **58**:475, 1949.

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Dr. D. J. Ottilie and **Dr. W. B. Henderson** are seeking Oelwein city council approval for construction of medical offices near the hospital there. Granting of a building permit has been delayed pending the results of a hearing on a redefinition of the zoning ordinance.

Dr. Raymond R. Bunge, professor of urology at SUI, is to present a paper before the Scott County Medical Society on Tuesday evening, March 1. His subject will be "Malignancies of the Kidney."

Dr. Raymond W. Houde, a staff member of the Sloan-Kettering Institute for Cancer Research, in New York City, was guest lecturer at the SUI College of Medicine on Monday, February 8. Dr. Houde, who is head of the analgesic studies section of the Institute's Department of Clinical Investigation, spoke on "The Principles of Clinical Trials Exemplified by a Clinical Assay of Analgesic Drugs."

Mr. Robert C. Howar, son of **Dr. and Mrs. B. F. Howar,** of Webster City, has been selected to receive the Iowa Clinical Medical Society Scholarship. The $400 award is made to a freshman medical student "on the basis of merit as evidenced by past performance of the student in his pre-medical studies and promise of future merit during his medical career." This is the second year the scholarship has been given by the Society. Last year **Mr. Jerry Ringer,** of Mount Vernon, received the award.

Dr. Jack Spevak, state crusade chairman for the American Cancer Society, spoke at the area planning workshop for Floyd County and 13 surrounding counties, in Charles City on January 27. The workshop was held to instruct workers in the April Cancer Crusade. In his talk Dr. Spevak emphasized the importance in cancer control of the efforts of researchers and groups of workers in cancer societies in every state.

Dr. F. O. W. Voigt, of Oskaloosa, has presented the science department of William Penn College with a set of volumes of the PROCEEDINGS OF THE NEW YORK ACADEMY OF SCIENCE.

Construction of a new building in Marshalltown designed to provide office suites for six medical practitioners and a complete pharmacy will begin early this spring. **Drs. E. L. Keyser, R. E. Keyser, R. H. Kruse** and **B. L. Trey** will occupy four of

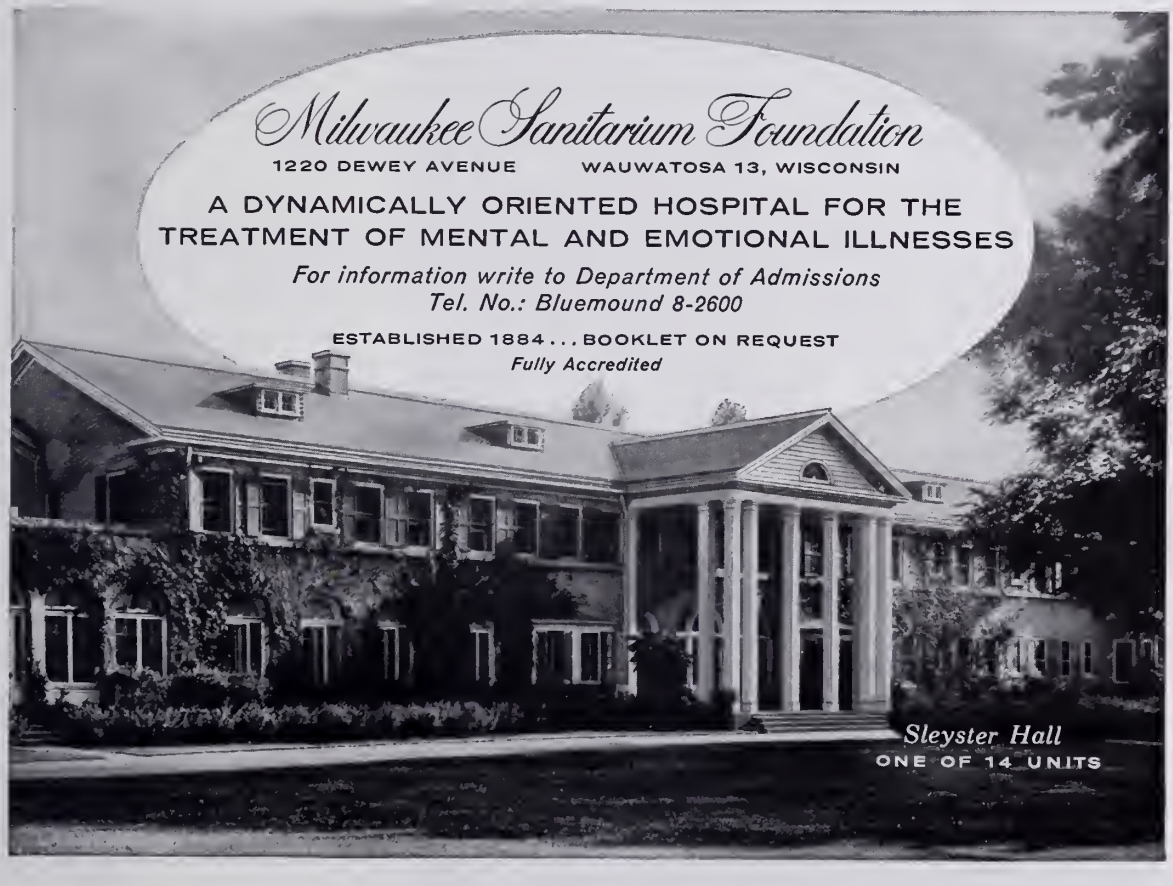
the suites. Two general practitioners new to Marshalltown will occupy the remaining suites in the new building, which is to be known as "Doctors' Park."

In the slightly more than four years that the S.U.I. Institute for Agricultural Medicine has been in operation, it has delved into problems of machinery safety, leptospirosis; bovine tuberculosis; psittacosis; the cultural and medical behavior of various nationalities; heart disease; the relationship of machine noise to deafness; dust and chemical sprays in relation to skin and lung disorders; rabies; and accidents on secondary roads that involve farm machinery. "Our primary purpose is to determine the important problems affecting the health of the farm worker with the hope that investigation might lead to the solution of some of them," **Dr. Franklin H. Top** said in a report given at the Symposium on Progress in Preventive Medicine in Los Angeles soon after the Institute was organized. A study of Q fever, one of the early projects, now is listed as complete as far as the Institute is concerned. This doesn't mean that fever has been whipped, Dr. Top says, but just that the Institute has carried the work as far as is possible within its organization.

One of the more spectacular events the Institute has had a hand in was the outbreak of leptospirosis on Prairie Creek in Linn County last fall. As a result of the Institute's work and some outside assistance, the disease was diagnosed and brought under control. During the outbreak, scientists were able to isolate the leptospirosis germ for a human being for the second time in medical history, an achievement which has meant a great deal to the staff. In addition to Dr. Top, the staff includes **Clyde M. Berry, Ph.D.**, and **Richard Tjalma, D.V.M.**

Two Carroll doctors and an alternate have been chosen tentatively to attend a refresher course on arthritis in New York in June. Announcement of who will attend will be made later, **Dr. Charles Fangman,** secretary of the local chapter of the Iowa Arthritis Foundation, said.

Dr. Tom Chin, a specialist from the USPHS Virology Center at Kansas City, Missouri, made a report to Webster County doctors and ones from surrounding counties at a dinner meeting in Fort Dodge, Thursday, February 4, on a scientific survey made in Webster County a year ago when incidence of an acute intestinal ailment reached near-epidemic proportions. Dr. Chin headed the survey team at that time.



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Members of the Waterloo Surgical and Medical Group moved into their new offices at 1125 W. 4th St., Friday, January 29. They include **Drs. Edward L. Rohlf, J. R. Thompson, W. C. Drier, John R. Walker, William K. Rock, Bernard F. Sand,** and **James R. Sisk.** Dr. Drier and Dr. Sisk have closed their offices at 1115 South Street, but the group's offices on Lafayette Street, and in Cedarloo will remain open.

The Linn County Medical Society will meet on March 10 at the Roosevelt Hotel in Cedar Rapids. Speaker for the evening will be **William Requarth, M.D.,** assistant professor of surgery, College of Medicine, University of Illinois. He will discuss "Treatment of Traumatic Wounds."

At the February 9 Dubuque County Medical Society meeting, **Dr. Emmet Bay,** a professor of medicine at the University of Chicago, spoke on three topics: "Anticoagulant Drugs," "Evaluation of Cholesterol and Fats as Applied to Heart Disease" and "Problems of Retirement and Aging."

In January **Dr. Parker K. Hughes,** of Des Moines, was chosen president-elect of the Iowa Methodist Hospital medical staff, and **Dr. Alonzo Jenks, Jr.,** began a two-year term as president. Dr. Hughes will serve as president-elect until January, 1962. **Dr. Stewart O. Olson,** a general practitioner, was elected secretary for one year. Three new chiefs-of-service include: **Dr. John Hess, Jr.,** general practice; **Dr. Don O. Newland,** obstetrics and gynecology; and **Dr. Robert R. Updegraff,** otolaryngology.

Dr. Paul T. Meyers, a radiologist at the Gilfillan Clinic and Davis County Hospital, in Bloomfield, was made a fellow of the American College of Radiology early in February.

Dr. Floyd Springer, of Des Moines, has been elected a fellow of the American College of Radiology.

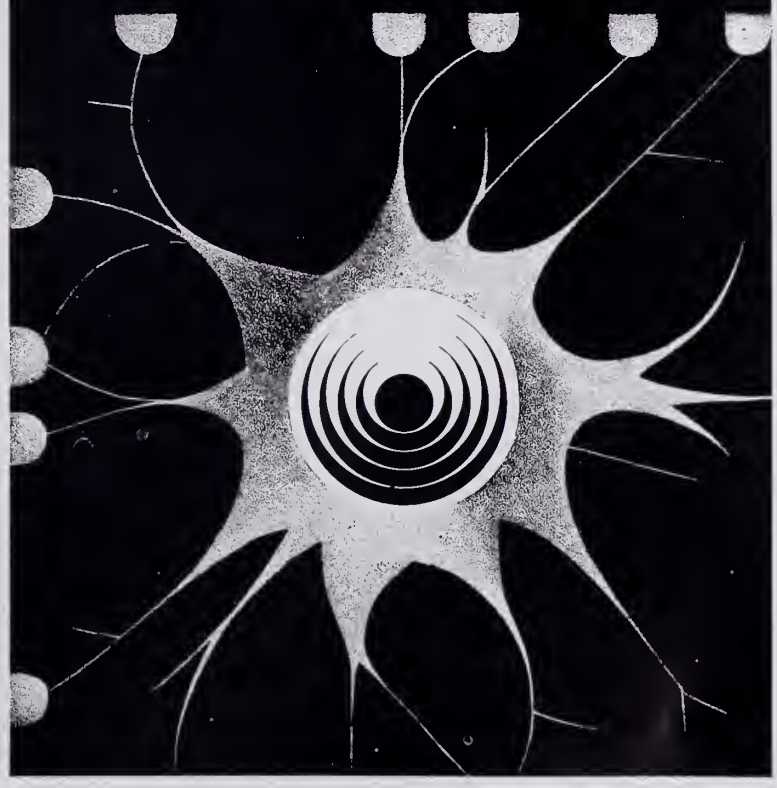
A $7,500 grant from the Eye Foundation of the Grand Encampment of Knights Templar was presented on February 12 to **Dr. A. E. Braley,** professor and head of ophthalmology at the SUI College of Medicine. The grant is to be used for research in the Department of Ophthalmology at SUI. Such grants are made to research and treatment institutions throughout the country and are made possible by contributions from members of the fraternal organization. Dr. Braley said there are numerous research programs under way in the Department of Ophthalmology, and that the grant money will be used where it appears to be the most needed from time to time.

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References: 1. Ayd, F. J., Jr.: Bull. School Med., Univ. Maryland *44*:29, 1959. 2. Azima, H., and Vispo, R. H.: A.M.A. Arch. Neurol. & Psychiat. *81*:658, 1959. 3. Lehmann, H. E.; Cahn, C. H., and de Verteuil, R. L.: Canad. Psychiat. A. J. *3*:155, 1958. 4. Mann, A. M. and MacPherson, A. S.: Canad. Psychiat. A. J. *4*:38, 1959. 5. Sloane, R. B.; Habib, A., and Batt, U. E.: Canad. M.A.J. *80*:540, 1959. 6. Straker, M.: Canad. M.A.J. *80*:546, 1959. 7. Strauss, H.: New York J. Med. *59*:2906, 1959.

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DEATHS

Dr. Ralph Frank Luse, 74, of Rolfe, died January 17 in Mercy Hospital, Fort Dodge. He had practiced medicine in Clinton for 30 years before moving to Rolfe last fall.

Dr. William Roy Owen, 82, retired Osage physician, died January 18 at the Mitchell County Memorial Hospital in Osage.

Dr. Lee Roy Martin, 48, died January 24 of leukemia in Council Bluffs following a four-month hospitalization. Dr. Martin was a past-president of the Pottawattamie County Medical Society, Southwest Iowa Handicapped Center and Council Bluffs Mercy Hospital staff, and a past vice-president of the American Association of Railway Surgeons.

Dr. Richard C. Wunschel, 39, of Davenport, died January 29. He was a specialist in anesthesiology who practiced principally in Moline, Illinois.

Dr. C. Arthur Soe, a former Elk Horn physician, died January 30 at his home in Santa Barbara, California, following surgery.

SELF-DISCIPLINE OF HEARING-AID RETAILERS

Several weeks ago, the hearing-aid industry issued a voluntary Code of Ethics for retailers, distributors and manufacturers of hearing aids and their components. One section deals with the use of ambiguous firm names that confer an aura of medicine, education or research upon essentially commercial enterprises. Such words as *center, institute* or *bureau,* when not properly qualified, the code declares, can be considered similar to "bait" advertising.

Within days after the 12-page document was issued to retailers, word was received by the Hearing Aid Industry Conference that they were voluntarily changing their firms' names. A Florida dealer is immediately dropping the name he has used for years, one which consisted of his town's name followed by "Hearing Center." He will substitute his own name followed by "Hearing Aid Company." An Oklahoma dealer is inserting the word "Aid" between "Hearing" and "Institute," thus helping to make it clear that he is selling hearing aids, rather than treating patients or doing research. Similar changes have been reported from states as distant as Hawaii.

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CHEMOTHERAPY OF EXTRAPULMONARY TUBERCULOSIS IN ADULTS

A Statement of the Committee on Therapy of the American Trudeau Society*

The management of pulmonary tuberculosis varies considerably to meet problems of individual cases, but the following general principles of chemotherapy, which are widely followed, are also believed to apply to many forms of extrapulmonary tuberculosis:

1. Antibacterial chemotherapy is recommended for all patients with active tuberculous infection.

2. Chemotherapy should be intensive and uninterrupted. Most physicians, but not all, advise combined chemotherapy, using isoniazid with either PAS or streptomycin. When it is well tolerated, PAS is usually employed because it is easily administered. Some physicians prefer to use three drugs—isoniazid, PAS and streptomycin—for more severe manifestations of tuberculosis. The usual dosage of isoniazid is 100 mg. three times daily (3-5 mg. per kilo body weight), but there is growing indication that larger doses are sometimes beneficial. Larger doses require the administration of pyridoxine to minimize the risk of neurologic complications (peripheral neuritis). PAS is given in maximal tolerated doses, ordinarily 4 Gm. three times daily (150-200 mg. per kilo body weight). Daily administration of streptomycin—1.0 Gm. (15-20 mg. per kilo body weight)—is ordinarily reserved for severe manifestations of tuberculosis, and injections every second or third day appear adequate for many cases.

3. Chemotherapy is continued for a prolonged period—usually two years and at least one year—after the tuberculosis has become inactive, as determined by x-ray, bacteriologic and clinical diagnostic methods.

4. Surgical treatment for pulmonary tuberculosis, particularly pulmonary resection, is ordinarily delayed for at least several months. This long preliminary course of medical treatment sometimes obviates the need for surgery, usually diminishes the risk of tuberculous complications of surgery, and sometimes permits more conservative operations than would have been necessary earlier in the course of the illness. At other times, lesions that appear to be inoperable improve substantially as a result of medical treatment and become operable. In some forms of extrapulmonary tuberculosis, it is probable that surgery, particularly the radical procedures, should be similarly delayed for several months after medical treatment is begun.

SKELETAL TUBERCULOSIS

When affected by tuberculosis, a weight-bearing

* Reprinted from THE AMERICAN REVIEW OF RESPIRATORY DISEASES, March, 1960.

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joint is more likely to require surgical fixation than a non-weight-bearing joint. Peripheral joints heal more rapidly and completely than proximal joints. Joints of the spine are more difficult to treat than joints of the extremities.

Tuberculosis which involves only the synovial membrane is often completely reversible, and a functional cure is usually possible with chemotherapy. Early diagnosis of such a condition may require biopsy.

The fusion of tuberculous joints is best delayed until medical treatment has diminished soft tissue reaction, closed any draining sinuses present, and stabilized the pathologic process, and may be avoided altogether in many instances.

Tuberculous abscesses should be evacuated when possible to facilitate healing.

TUBERCULOUS LYMPHADENITIS

Tuberculous lymph nodes often resolve rather slowly under treatment with specific drugs, but eventual healing is usually possible without surgery. Abscesses associated with tuberculous lymph nodes should be evacuated (aspirated) and occasionally resected. Acid-fast bacilli that are not typical M. tuberculosis are occasionally found to cause lymphadenitis. These organisms are usually not responsive to antituberculosis drugs.

GENITOURINARY TRACT TUBERCULOSIS

Tuberculous cystitis responds promptly when the infection is recent and superficial. Despite early clearing of symptoms of cystitis, prolonged treatment is essential for permanent results.

Renal tuberculosis demands prolonged medical treatment in all cases—for even longer periods than in the case of pulmonary diseases—and results are frequently satisfactory, even without resection of seriously damaged kidneys. Opinion among surgeons is divided as to what constitutes an indication for nephrectomy.

Tuberculous epididymitis, seminal vesiculitis and prostatitis respond slowly but definitely to adequate and prolonged chemotherapy.

Tuberculosis of the female genital tract frequently requires surgery in addition to chemotherapy, especially removal of the abscesses associated with tuberculous salpingitis. Tuberculosis of the endometrium is usually secondary to tuberculosis elsewhere in the genital tract, but appears to respond to medical treatment.

MILIARY TUBERCULOSIS AND TUBERCULOUS MENINGITIS

These forms of tuberculosis may frequently be treated successfully, especially when early, intensive and prolonged therapy is administered. Isoniazid is considered the most important drug. Streptomycin is usually employed daily for a few weeks or months. There is growing evidence that the adrenal corticosteroid hormones are beneficial. Intrathecal therapy is rarely used in the treatment of tuberculous meningitis.

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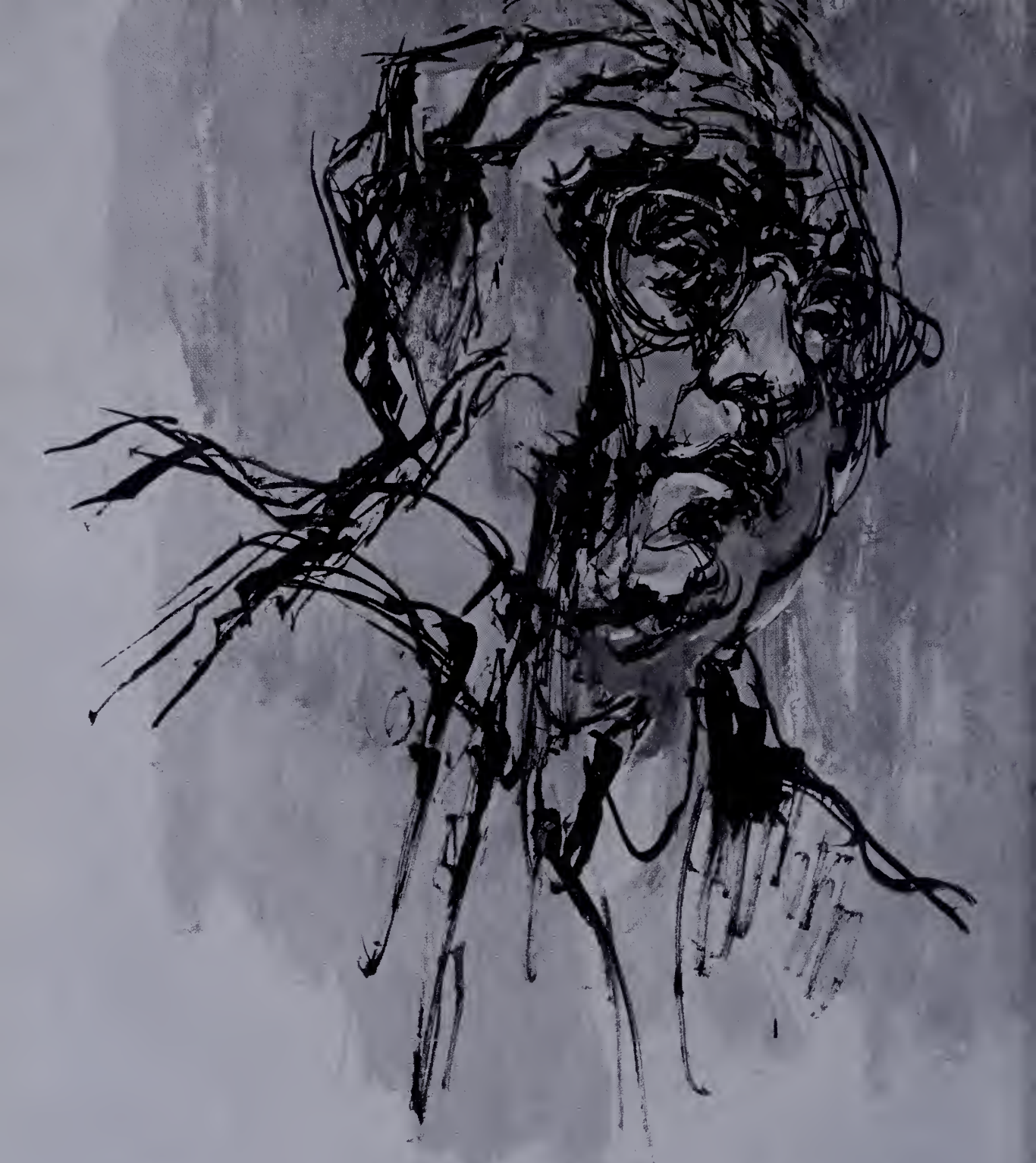
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ALLERGY TO ALCOHOL

People who think themselves allergic to alcoholic beverages—and many do—probably are wrong. But some cases of that sort have been reported in the medical literature. Two S.U.I. physicians described such a patient on January 12 in Hollywood, Florida, at the meeting of the American Academy of Allergy.

Drs. Curtis C. Drevets and Paul M. Seebohm discussed an individual who had shown delayed hypersensitivity reactions to alcohol, whether taken orally or applied to the skin.

Dr. Seebohm, a professor of internal medicine and director of the S.U.I. allergy clinic, said it is not uncommon to hear patients complain of being allergic to whiskey, beer or wine. One of the frequent symptoms they describe is a "running nose," and this can be traced to the fact that alcohol dilates the blood vessels, including those in the nose, and a watery fluid sometimes escapes into the nasal tissues.

Dr. Drevets, a resident in internal medicine, said that the true case of alcohol allergy at University Hospitals had been admitted for another ailment, but told of experiencing itching and redness of the hands and fingers on the mornings after drinking small amounts of alcoholic beverages. Two or three ounces were sufficient to produce the symptoms.

Soon after the patient's admission, ethyl alcohol (the kind found in beverages) was used to cleanse his skin prior to the withdrawal of blood for a routine test. About 20 hours later, the skin at that spot became red. Wondering whether the inflammation might have been caused by the alcohol, the doctors applied patch tests containing alcohol of varying strengths. The result was inflammation at the patch sites, and the degree of inflammation was proportional to the strength of the alcohol that had been applied. Later, when alcohol was administered internally in another diagnostic procedure, the patient experienced intense itching and inflammation over the arms, hands, chest, neck and thighs. Symptoms were limited to itching and redness, the physicians reported, and the patient at no time experienced pain. The itching and redness gradually subsided.

The discomfort associated with the allergy had been great enough, however, to make the patient refrain from drinking alcoholic beverages during the year prior to his hospitalization.

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ATHLETIC DIETS

Diet for the athlete who participates in competitive sports need not differ in major respects from that of any other normal person, according to nutritionists Jean Mayer and Beverly Bullen, of the Harvard University School of Public Health.*

The athletic variety of diet faddism is extremely widespread, they believe. "Many of the more bizarre nutritional beliefs of coaches echo Greek, Roman or even older, tribal advice."

For example, one of the most popular training-table practices has been the consumption of large quantities of meat, supposedly destined to replace the protein "losses" incurred during severe muscular work. This practice has been traced back to the fifth century B.C.

Wide variations of protein intake, however, do not seem to influence performance, the authors said. Large amounts of meat several times a day are unnecessary.

In general, the nutritionists recommended that athletes eat not less than three meals a day. "When the sports practiced are particularly protracted and exhausting, up to five lighter meals may be a preferable pattern. Available evidence indicates that the relative composition or size of the meal preceding an athletic event of short duration has little influence on performance."

There is also evidence showing that in sports requiring endurance and prolonged muscular work, performance is better maintained on a high carbohydrate diet than on a high fat diet, the "usual" diet that is consumed for several days before an athletic event. In such cases, even the slight increase in efficiency with a high carbohydrate diet may well prove decisive.

Salt supplementation is necessary only if considerable sweating occurs during the beginning of training, under vigorous climatic conditions or with prolonged exertion, the nutritionists said.

"There appears to be no particular reason either to advocate alcohol or mild stimulants such as tea and coffee or to erect a complete taboo against them. The long-term physiologic effects of such taboos may be undesirable," they remarked.

In conclusion, they emphasized that there is no nutritional justification for training tables at present. "The normal fare of schools and colleges should be wholesome and adequate for all students. Extra needs of athletes can be taken care of by second or third portions and increased bread consumption."

* Mayer, J., and Bullen, B.: Nutrition and athletic performance. POSTGRADUATE MEDICINE, 26:848ff., (Dec.) 1959.

PAN-PACIFIC SURGICAL CONGRESS

The Eighth Congress of the Pan-Pacific Surgical Association will be held in Honolulu, September

(Continued on page lxxxi)

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CLINICAL REEVALUATION OF DAYTIME SEDATIVES

Drs. R. C. Batterman, A. J. Grossman, P. Leifer and G. J. Mouratoff have made an investigation to determine which representative agents currently used for controlling anxiety states most nearly meet the specifications outlined for an ideal sedative.*

To conform with conditions encountered in everyday general practice, they recorded responses according to rigid "all or none" criteria of efficacy. Anything less than complete relief was regarded as failure.

Because insomnia accompanied daytime anxiety in about 70 per cent of the patients treated, the authors observed the effectiveness of small multiple daytime doses of each drug in controlling both symptoms. They also considered the response in terms of a "therapeutic index"—per cent effectiveness: per cent untoward reactions.

They studied 168 ambulatory outpatients with clearly defined symptoms of anxiety and nervous tension during a five-year period. Six widely-used sedatives or tranquilizers and a placebo were studied in 357 trials—15 and 30 mg. phenobarbital, 15 and 30 mg. doses of butabarbital sodium, 200 mg. acetylcarbromal, 125 and 250 mg. glutethimide, 400 mg. meprobamate and 5 mg. prochlorperazine. Trials were continued uninterruptedly for not less than two weeks, and usually for three weeks or longer. Multiple comparative trials were made in over half of the patients.

Butabarbital sodium provided the highest rating (therapeutic index) reflecting clinical usefulness of sedatives studied for control of anxiety states as compared with side effects. Butabarbital sodium was also the only drug that gave satisfactory control of both daytime and nighttime symptoms of anxiety without recourse to additional therapy.

Glutethimide in small doses was found to be an effective daytime sedative, but supplementary hypnotic doses are required to control insomnia.

Phenobarbital and acetylcarbromal produced satisfactory daytime sedation, but chronic administration produces a high incidence of cumulative toxicity. Meprobamate and prochlorperazine, representative of ataractic drugs, were not found to be satisfactory daytime sedatives.

* Batterman, R. C., Grossman, A. J., Leifer, P., and Mouratoff, G. J.: POSTGRADUATE MEDICINE, 26:502, (Oct.) 1959.

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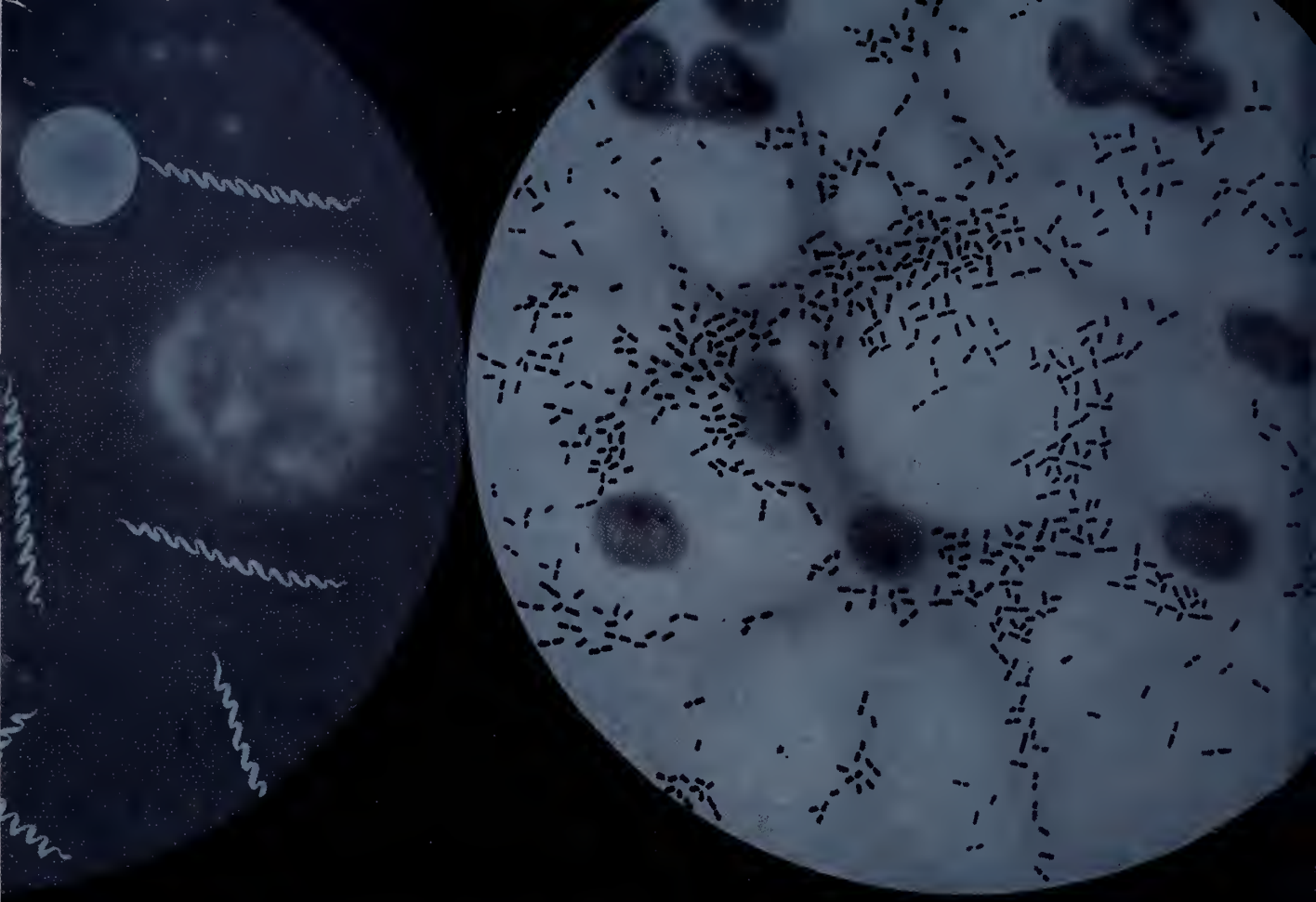
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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



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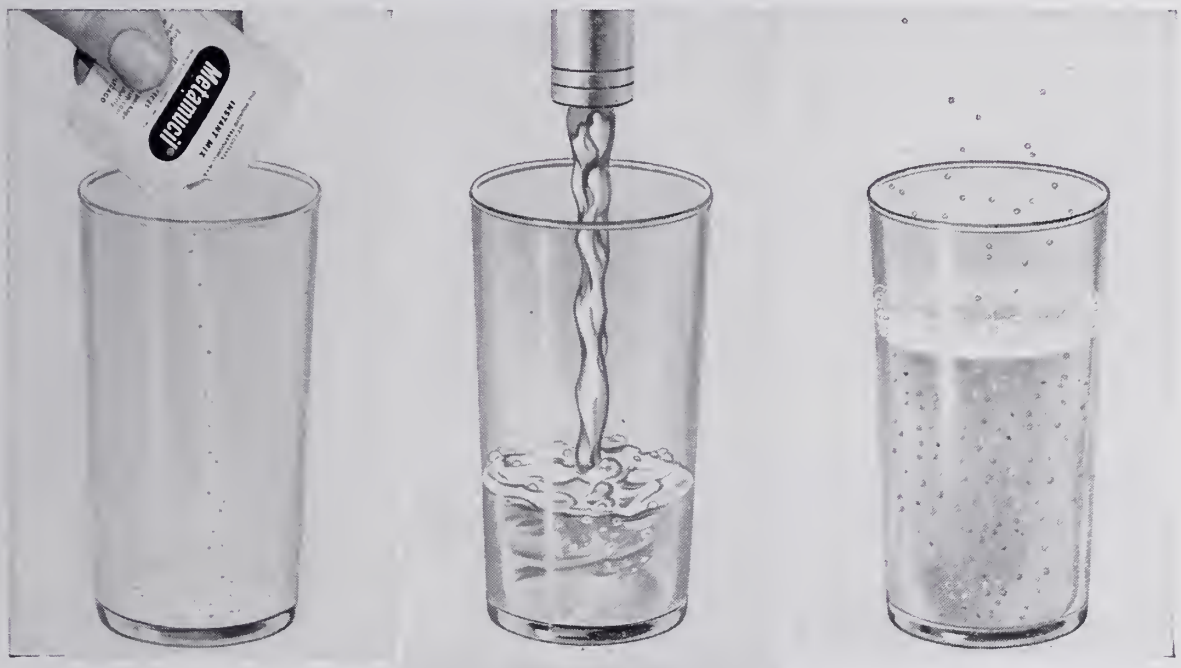
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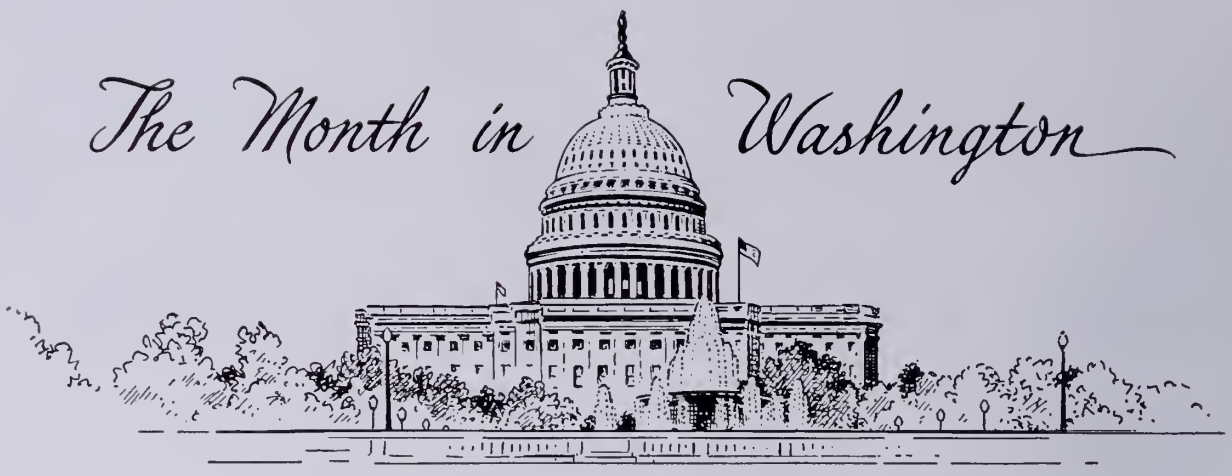
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The Month in Washington



Washington, D. C.—Congress has been warned against acting on legislation to provide health care of the aged before receiving the recommendations of next year's White House Conference on Aging.

Rep. Noah M. Mason (R., Ill.), ranking minority member of the House Ways and Means Committee which handles such legislation, put in to the CONGRESSIONAL RECORD an exchange of correspondence with former Rep. Robert W. Kean (R., N. J.), chairman of the National Advisory Committee supervising preparations for the White House Conference next January.

Rep. Mason said the correspondence "reveals the reason why Congress should await the results of the Conference."

"Let us not waste the $2 million we have already appropriated to bring thousands of good minds together to suggest solutions to problems of our aging population," Rep. Mason said. "Certainly we should get the benefit of their advice rather than enact legislation in haste and without proper study."

Dr. F. J. L. Blasingame, executive vice-president of the American Medical Association, also voiced this warning in a radio interview while he was in Washington for conferences with White House aides and Arthur S. Flemming, secretary of health, education and welfare.

Dr. Blasingame said that it would be "neither practical nor realistic" for Congress to act on such legislation until the White House Conference and other sources had compiled "more conclusive and complete information" on a nationwide basis.

Dr. Blasingame and other AMA representatives emphasized to President Eisenhower's aides and Flemming that the medical profession is unalterably opposed to any legislation, such as the Forand bill, that would use the Social Security system to provide health care for the aged.

In his letter to Mason, Kean predicted that "in all probability" most of the White House Conference's recommendations would be for "state and local activity" in dealing with the problems of the aged. Kean said that action at the state and local level "seems most effective."

The National Association of Manufacturers charged in a pamphlet that supporters of Forand-type legislation have exaggerated the health care needs of the nation's older people. The NAM pamphlet also said the Forand bill was an entering wedge for a cradle-to-grave compulsory health insurance plan.

Meantime, supporters of the Forand bill—particularly the AFL-CIO, continued an intensive pressure campaign aimed at Congressional approval of the legislation in this national election year when Congressmen are more susceptible to such pressure.

Another Democratic presidential hopeful, Sen. Hubert H. Humphrey (D., Minn.), reiterated his support for Forand-type legislation. He proposed a six-point program for aid for the elderly, including "an extension of the Social Security system to cover the cost of hospital and nursing home care for senior citizens."

Sen. John F. Kennedy (D., Mass.), a leading contender for the Democratic nomination for President, has introduced similar, but even broader, legislation.

Elsewhere on the national legislative front, prospects brightened for Congressional passage this year of a bill to permit physicians and other self-employed persons to set aside money for retirement.

The Administration, which last year opposed a bill with such provisions, appeared in mid-March to be ready to support it with modifications.

The Administration's shift improved the already favorable odds that both the Senate Finance Committee, where a House-approved bill was pending, and the Senate would approve such legislation this session.

* * *

The issue of generic names vs. trade names in doctors' prescriptions came to the forefront in the

Senate Monopoly Subcommittee's investigation of the drug industry.

Dr. Austin Smith, president of the Pharmaceutical Manufacturers Association, testified at a Subcommittee hearing that "behind brand names lie the reputation, reliability and skill of the manufacturer." He said use of generic terms would restrict a physician's choice as to drugs and would transfer some of the physician's responsibility to the pharmacist.

"By brand name prescription, the doctor orders for a patient a specific product in which he has absolute knowledge of quality, purity and any side effects that might have importance for a particular patient," Dr. Smith said.

Dr. R. B. Robins, of Camden, Ark., who accompanied Smith at the hearing, submitted a similar statement. He said he used trade names because: "It is simpler to write such a prescription, and I can be assured that no substitution will be made by the druggist. This assures me that the patient will get top quality."

Dr. Robins appeared before the Subcommittee as a private practicing physician and not in his capacity as a member of the AMA Board of Trustees.

Despite this testimony, Sen. Estes Kefauver (D., Tenn.), the chairman of the Subcommittee, said he hoped physicians would give "serious thought" to use of generic terms. He contended that doctors thus could bring down drug prices by opening the way for small manufacturers to give the major companies "some good, honest, old-fashioned price competition."

* * *

President Eisenhower's Conference on Occupational Safety urged stronger x-ray legislation by the states with an aim of protecting consumers and workers against too much radiation.

The three day Conference also concluded that there is need "for effective educational programs to reduce both consumer and occupational exposures to x-rays used for diagnosis and therapy, x-ray installations in industry for product control and related purposes, and various x-ray devices, such as shoe-fitting fluoroscopes."

The Conference also recommended intensive efforts to develop better ways of determining safe exposure levels of radiation.

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General Surgery, One Week, May 23
Gallbladder Surgery, Three Days, June 20
Surgery of Hernia, Three Days, June 23
Board of Surgery Review, Part II, Two Weeks, August 8
Gynecology, Office and Operative, Two Weeks, June 20
Obstetrics, General and Surgical, Two Weeks, May 16
Diseases of the Chest, One Week, May 23
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TWO-YEAR GP RESIDENCY

A new, two-year Family Doctor Program, designed to give better training to future general practitioners, is scheduled to begin this July in three hospitals, The pilot study has been approved by the AMA Council on Education and Hospitals and, in large measure, seems to meet specifications of the American Academy of General Practice. As outlined by the Council's associate secretary, Dr. John C. Nunemaker, these are the key features of the intern-residency project, to be tested at the Baltimore City Hospital, the University of Kansas Medical Center, and the Indiana University Medical Center:

Heavy emphasis on outpatient service, including follow-up in the home, handling specialist referral, and social and rehabilitation services.

Training in psychosomatic and emotional aspects of illness.

An integrated progressive program calling for work in internal medicine, pediatrics and emergency room procedures, plus electives expected to consists of ob-gyn, radiology and anesthesiology. Surgery will be confined to minor operations and emergency cases; there will be no "block assignment."

The Delegates of both the AMA and AAGP approved reports urging a two-year program as the minimum requirement prior to family practice and agreeing on most facets of the training. Exceptions raised by AAGP were that ob-gyn should be required, and that surgery should have more emphasis.

Dr. Nunemaker said the lack of a surgery block was one main difference between present rotating internships or GP residencies and the new program.

Speaking before the fourth annual meeting of the Association of Hospital Directors of Medical Education, he pointed out that additional training in surgery is optional. He also said objections were being raised primarily "by individuals and groups worried because the program might be used as a basis for withdrawal of surgery privileges from GPs now on hospital staffs."

Dr. Nunemaker believes the program "may become a basic one which men could take before going into specialties." However, he said, specialty boards haven't yet committed themselves as to whether they will give credit toward certification.

A spokesman for the AAGP further predicted that its Commission on Education would recommend a minimum of two years of graduate training for future membership before the Congress of Delegates meeting in Philadelphia this March. "This Family Doctor Program can fill the bill," he declared.

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THEY'RE AT IT AGAIN!

The do-gooders, irrepressible in their ambition to have the government do for us what we should be doing for ourselves, are at it again and with a vengeance.

What these deluded disciples of a "planned" security do not seem to realize is that if we were not taxed for services and "benefits," we'd have money enough of our own to pay for what we need.

What are they up to now?

It has been covered before, but it will bear repeating: They are sitting up nights to foist socialized medicine on the American people—"free" hospitalization and pay for being sick. They'd include special benefits to those 65 years old and older.

Nothing is "free," despite anything the visionaries may claim. The services of physicians, hospitals, nurses, and other hospital help cost money. So do drugs, rest homes, etc. for our senior citizens—all of whom, under the sugar-coated Forand bill now before Congress would supposedly benefit.

If this care, hospitalization and sick benefit "isn't going to cost us anything, because the government pays for it," then how will it be financed? Simple: By a payroll tax, applied to every wage earner in an amount that is expected to yield $2 billion the first year. Actual cost of providing the benefits under the Forand bill are expected to be in excess of that amount. It is predicted the annual cost may run as high as $7 billion within 20 years, due to the fact that people live longer now.

There's another thing about the Forand bill that should grate against the pride and conscience of every freeborn American. Should it pass, it would be compulsory to submit to payroll deduction. There is no choice. The plan is regarded by opponents of the bill, who have given it thorough and painstaking study, as a threat, if not actually spelling the end of social security as it now functions.

Is there a way to forestall passage of this socialistic measure? There is, and at a cost of not more than three cents on a postcard. Simply address a protest to your senators and your congressman. Simply tell them you are against the Forand bill, or any other bill that would open the door for the intrusion of socialized medicine on the American scene.

There's yet another angle to it: With "free" medical care, our hospitals would be stacked to the rafters with patients with sore toes, pains in the neck and what have you, to the exclusion of patients in dire need of attention. That, too, is something to think about.

—Editorial in the FAIRMONT (Minnesota) DAILY SENTINEL, Friday, March 11, 1960.

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Personals



Dr. Herbert B. Paulsen, of Harris, was honored on Sunday, February 14, with an open house at St. John's Lutheran Church there. The event marked his thirtieth anniversary in the medical profession. Dr. Paulsen is now the senior practicing doctor in Osceola County and has served as county coroner for many years. He has held all offices in the Osceola County Medical Society and many public health offices as well.

Two Sioux City physicians, **Dr. R. C. Larimer** and **Dr. Anthony H. Kelly,** participated in a Heart Forum in Battle Creek, Monday night, February 15. The meeting was sponsored by the Woodbury County Medical Society.

Dr. Keith Hughet, of Osage, has accepted a post with the Tucson Clinic, in Tucson, Arizona, and began his duties there March 1. He has been associated with the Osage Medical Group since its organization, and was with **Dr. John Eiel** and his associate doctors prior to that time.

The retirement from practice of **Dr. A. W. Burgess,** of Iowa Falls, on March 1, marked the first time in almost 60 years that the name of Burgess has not been associated with the medical profession in Iowa Falls. His father came to Iowa Falls from Radcliffe in 1901. Within a short time, **Dr. Herbert E. Gude,** who is taking his residency in surgery at Lafayette, Indiana, will join **Drs. R. W. Dunlay** and **T. C. Graham,** the former associates of Dr. Burgess.

Dr. George N. Bedell, associate professor of internal medicine at the SUI College of Medicine, gave talks at two meetings of doctors in February. On February 24 he presented two papers at the Sioux Valley Medical Society meeting in Sioux City. His topics were "Treatment of Pulmonary Emphysema" and "Clinical Usefulness of Pul-

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monary Function Tests." On February 11 Dr. Bedell gave a talk to the Muscatine County Medical Society, in Muscatine, on "Treatment of Pulmonary Emphysema."

Dr. Lewis E. January, professor of internal medicine at the SUI College of Medicine, participated in a postgraduate course at the University of Oklahoma medical school February 9. The course was on "Rehabilitation of Patients With Cardiac Disease."

Dr. Margaret A. Ohlson, professor and head of nutrition at the SUI College of Medicine, presented a paper on "The Problem of a Calcium Requirement" at a research session of the National Dairy Council's annual meeting in Chicago on January 25.

At the Johnson County Medical Society meeting on March 2 **Dr. Charles Shagass**, associate professor of psychiatry at SUI, spoke on "Experimental Psychoses."

Dr. Glen Nielsen, of Des Moines, is attending the White House Conference on Children and Youth, in Washington, D. C., on March 29-April 2, as a representative of the Iowa Pediatrics Society.

Grants totalling $44,200 were awarded by the American Cancer Society recently to nine scientists at the State University of Iowa's College of Medicine. The recipients and the amounts include: **Dr. R. G. Bunge,** professor of urology, $3,000 for a study of cancer of the testis as the disease relates to congenital abnormalities and to alterations of the normal hormone balance; **Dr. R. L. Dryer,** associate professor of biochemistry, $4,500 for a biochemical study of an enzyme which metabolizes fats in the body; **Dr. T. C. Evans,** professor and director of the University's Radiation Research Laboratory, $9,000 to explore the usefulness of radioactive isotopes in the treatment and diagnosis of cancer, and to determine the biochemical and radiosensitivity differences between cancerous and non-cancerous cells; **Dr. R. H. Flocks,** professor and head of urology, $6,000 for a study of certain chemical compounds that may be useful in management of cancer of the prostate; **Dr. J. R. Fouts,** associate professor of pharmacology, $5,500 for comparative studies of drug metabolism in normal and abnormal tissue; **Dr. W. M. Fowler,** professor of internal medicine, $6,000 for studies of leukemia and other diseases of the blood; **Dr. J. P. Hummel,** associate professor of biochemistry, $3,000 for a study of tumor-inhibiting and tumor cell-binding properties of a substance known as polyxenylphosphate; **Dr. A. P. McKee,**

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professor of bacteriology, $6,000 for studies aimed at developing a method to detect a patient's immunologic response to his own tumor or to tumors in other patients; and **Dr. C. C. Wunder,** assistant professor of physiology, $1,000 for experimental and theoretical studies in the biophysics of growth and form.

Dr. William E. Connor, assistant professor of internal medicine at S.U.I., has been awarded a traveling scholarship by the American College of Physicians of which he is an associate. Two College of Physicians awards are given annually to provide recipients an opportunity to spend approximately a month visiting fellow scientists at other institutions for observation and postgraduate study. Dr. Connor will study for the month of April at the Sir William Dunn school of pathology at Oxford University, in England. His particular interest concerns the way in which fat particles enter the blood-vessel wall from the blood stream and set up the fatty deposits that are responsible for most cases of coronary artery disease.

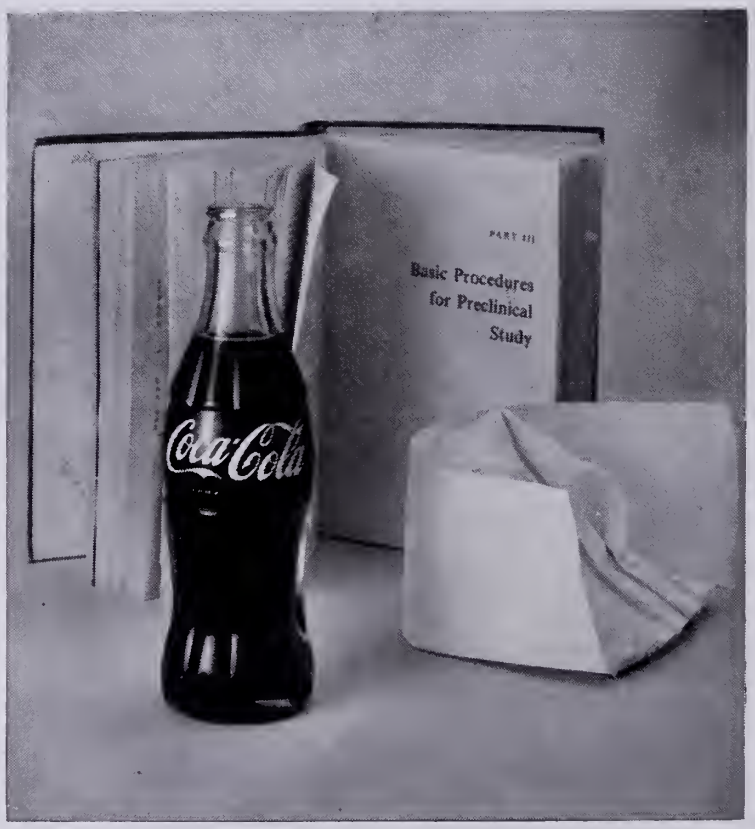


Dr. Wm. Connor

Dr. R. W. Hill has announced his intention of leaving Lake Mills this summer. His practice will be continued by **Dr. Stanley Haughland,** a graduate of the State University of Iowa who is presently serving an internship at Cedar Rapids.

The Sioux Valley Eye, Ear, Nose and Throat Academy held its annual meeting Wednesday, February 24, at the Sheraton-Martin Hotel, Sioux City. Guest speakers on the program were **Dr. Eugene L. Derlacki,** of Chicago, who spoke on the subjects "Therapy of Conduction Deafness" and "Allergy in Otolaryngology," and **Dr. William H. Morrison,** of Omaha, who spoke on "Tonometry and Tonography" and "The Control of Glaucoma."

Dr. Gene K. Van Zee, of Pella, has been elected president of the Marion County Medical Society for 1960. Other officers elected at the February



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Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or gram-positive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative *Hemophilus influenzae* and *Klebsiella pneumoniae*. Although *K. pneumoniae* causes only about 1 to 2 per cent of pneumonia cases on the average,[1] these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey[2] it was found that penicillin produced severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.[3]

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

Some Micro-organisms Susceptible[a] to Tetracycline (TETREX)[b]

Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; *C. diphtheriae; B. anthracis; E. coli;* Proteus; *A. aerogenes; Ps. aeruginosa; K. pneumoniae;* Shigella; Brucella; *P. tularensis; H. influenzae; T. pallidum;* Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; *E. histolytica; D. granulomatosis.*

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

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meeting of the group were: **Dr. D. A. Mater**, of Knoxville, vice-president; **Dr. C. R. Burroughs**, of Knoxville, secretary-treasurer; **Dr. Peter Van Zante**, of Pella, delegate to the Iowa State Medical Society, and Dr. Mater, alternate delegate.

Dr. J. W. Reinertson, of Cedar Rapids, is one of 20 physicians in the United States recently selected to receive a Wyeth Pediatric Residency Fellowship. The fellowship consists of $2,400 per year for a two-year residency program. Dr. Reinertson has accepted a pediatric residency appointment at Blank Memorial Hospital in Des Moines, to begin July 1, 1960.

The possibility of establishing a medical school in the Quad-City area has been brought to the attention of members of the Iowa-Illinois Central District Medical Association. **Dr. Elliott F. Parker**, of Moline, president of the Association, states that in the next 10 years 15 new medical schools will be started in the United States. "The federal government will probably allocate funds for the establishment of these needed schools," he said.

Dr. J. A. Broman, of Maquoketa, was elected chairman of the newly organized Maquoketa Community Development Council on January 25. The Council was organized "to make Maquoketa a better place in which to live—for all its residents." Council members were appointed by each of several local service organizations.

Dr. J. L. Ehrenhaft, chairman of the Division of Thoracic and Cardiovascular Surgery at SUI and **Dr. Jacqueline A. Noonan**, an assistant professor of pediatrics at SUI, were featured speakers at a public meeting sponsored by the Muscatine County Medical Society and the Muscatine Heart Association, on February 22, in the Muscatine High School Auditorium. Dr. Ehrenhaft showed the color film "Open Heart Surgery."

The Junior League of Des Moines and the Board of Directors of the Des Moines Child Guidance Center held open house at the Center the afternoon of March 3, in honor of **Dr. Milford Barnes, Jr.**, who became medical director of the institution on January 1.

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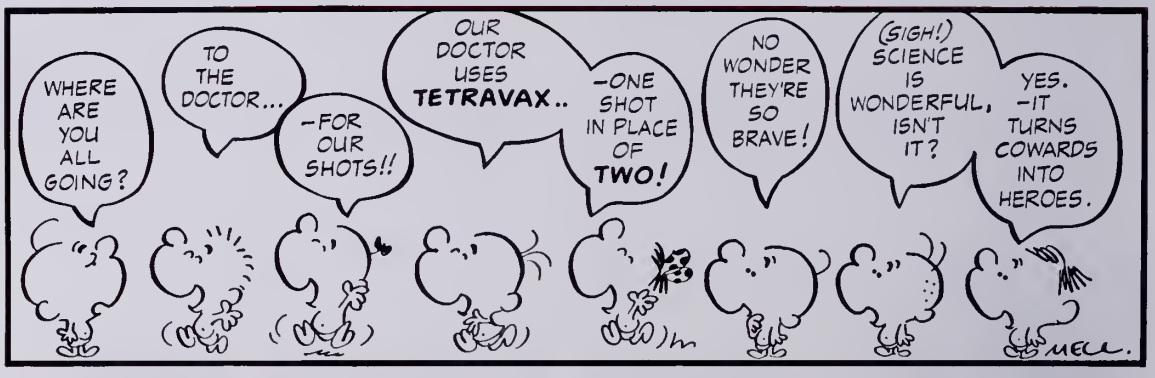
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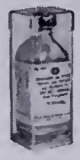


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Doctors Clifford W. Losh, Jr., and **William C. Shinkle,** of Des Moines, entertained the local medical profession at a cocktail buffet at the Wakonda Club on the evening of February 29, in introduction of **Dr. and Mrs. John H. Fatland.**

Dr. A. M. Rabiner, professor emeritus of neurology at the State University of New York, spoke March 14 at the SUI College of Medicine. His subject was "Concerning Evolution and Dissolution of Structure and Function." Dr. Rabiner is currently director of neurology and clinical director of the Jewish Chronic Disease Hospital in New York City and associate editor of the journal ANGIOLOGY.

Dr. Carroll B. Larson, head of orthopedic surgery, and **Dr. Franklin H. Top,** head of preventive medicine and public health at SUI, spoke at the twenty-third Annual Meeting of the New Orleans Graduate Medical Assembly, March 7-10.

An open house for physicians only will be held at the Wolfe Eye Clinic, Marshalltown, on Saturday, April 2, from 2 to 5 p.m. The Clinic will be open for public viewing the following day, Sunday, April 3. Physicians housed in the new 70x100 foot building are **Dr. Russell Wolfe, Dr. Russell Watt, Dr. Ralph Carpenter** and **Dr. Otis D. Wolfe.**



Dr. Harold Schedl

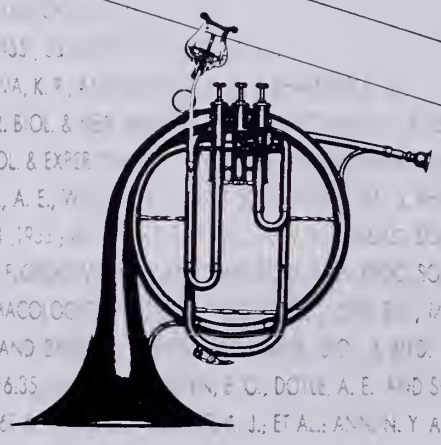
Dr. Harold P. Schedl, research assistant professor of internal medicine at SUI, has been named to receive a Lederle Medical Faculty Award which will provide a major portion of his support for the next three years. Dr. Schedl has been working with **Dr. James Clifton,** associate professor of internal medicine, on some of the various basic processes of food absorption.

The Polk County Medical Society and the Polk County Bar Association will hold a combined meeting at the Hotel Savery, Des Moines, on April 20. The social half hour begins at 6 p.m. The sub-



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ject of the joint meeting will be "Divorce, a Preventable Malady?" Panel moderator and speakers will be announced at a later date.

The March meeting of the Polk County Medical Society featured **Dr. Ernest L. Wynder,** of New York City, who spoke to the members on the subject "Towards a Solution of the Smoking-Lung Cancer Problem."

Early in March, **Dr. Daniel B. Stone,** assistant professor of internal medicine at SUI, received a $30,000 Markle Award given to scholars in medical science. The $30,000 will be set aside by the Markel Foundation for use by SUI toward Dr. Stone's support over the next five years. The Foundation established the program "to improve medical research and education by assisting some of the promising young teachers and investigators who too often, for financial or other reasons, must forego academic careers to enter private practice or industrial laboratories." Dr. Stone, a native of England, was a National Institutes of Health trainee at SUI from 1957 to 1959. He was appointed to the rank of assistant professor of internal medicine last year and is currently doing research on diabetes—particularly degenerative disease complicating diabetes.

Dr. John F. Collins, of Fort Dodge, was recently named president of the Lutheran Hospital medical staff there. He succeeds **Dr. E. E. Moore,** of Fort Dodge. Other new officers of the staff are **Dr. R. W. Lee,** vice-president; **Dr. R. O. Swann,** secretary; and **Dr. E. B. Dawson,** member-at-large of the executive committee.

Dr. John Conner, of Nevada, has been named chief of staff of the Story County Hospital there for the year 1960. He replaces **Dr. W. B. Sperow,** of Nevada. Other officers elected to the staff were **Dr. John Bacon,** of Ames, and **Dr. W. G. Dennert,** of Boone, radiologists; **Dr. R. H. Mordaunt,** of Nevada, chief of medical services; **Dr. Merton A. Johnson,** of Nevada, chief of surgical services; and **Dr. F. C. Coleman,** of Des Moines, pathologist.

An American Psychiatric Association regional research conference on child development and child psychiatry was held March 18 and 19 at SUI. The conference was held in tribute to **Dr. Arnold Gesell,** a pioneer in the study of child development, and was under the auspices of the Department of Psychiatry at SUI's College of Medicine and the University's Psychopathic Hospital. The event was the first regional conference of the American Psychiatric Association to be devoted entirely to the problems of children. The purpose



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of the meeting was to stimulate research interest as well as to report the results of research. The proceedings of the conference will be published by the American Psychiatric Association. The State University of Iowa was recommended as a desirable conference site because of its prominence in the field of child development.

On Sunday night, March 5, the Black Hawk County Medical Society sponsored a public service forum on the subject of cancer, broadcast on station KWWL-TV, Waterloo. **Drs. Herbert Schulman, A. W. Devine, Vernon Plager,** and **R. A. Weyrauch** answered some of the questions most often asked on the subject.

Dr. Edmund G. Zimmerer, the state commissioner of health, has stated that Iowa is badly in need of a virus laboratory. It was proposed during the last Legislature that the State Hygienics Laboratory be expanded and a separate building be set aside for a virus laboratory. The State Board of Regents, however, turned down the request. Dr. Zimmerer pointed out that such a laboratory would not only be beneficial to the state water control program but would be especially helpful in cases of an epidemic such as Asian flu or polio. He pointed out that all surrounding states have a virus laboratory and that the lack of such a lab in Iowa has handicapped his department considerably.

Gifts and grants totalling more than $145,000 for research at the SUI College of Medicine were accepted recently by the finance committee of the State Board of Regents. U.S.P.H.S. has allocated $46,000 to **Dr. William B. Bean,** professor and head of internal medicine, for research in arthritis and metabolic disease; $10,127 to **Dr. E. D. Warner,** professor and head of pathology, for research in atherosclerosis; $24,902 to **Dr. H. F. Hsu,** a research associate professor of hygiene and preventive medicine, for work on the characteristics of various strains of Schistosoma japonicum, a parasite which infects millions of persons in certain areas of the Orient; $9,722 to **Dr. R. G. Janes,** professor of anatomy, for research on ocular changes which occur in diabetes; $14,053 to **Dr. Ian Maclean Smith,** an associate professor of internal medicine, for studies on staphylococci; and $14,398 to **R. A. Tjalma, D.V.M.,** an assistant professor of hygiene and preventive medicine, for studies of the epidemiology of leptospirosis in Iowa. Some of the larger ones of the other grants are $5,000 from the National Vitamin Foundation, Inc., for research in metabolism, and $2,500 from the Nutrition Foun-

dation for studies of human pantothenic acid deficiency, both to Dr. Bean; $2,000 from the Iowa chapter of the Arthritis and Rheumatism Foundation to **Dr. A. E. Flatt,** assistant professor or orthopedic surgery, for research in the use of prostheses in rheumatic joints; $5,000 from a private citizen to **Dr. R. H. Flocks,** professor and head of urology, for research in prostatic cancer; $5,000 from the M&R Dietetic Laboratories, Inc., to **Dr. Samuel Fomon,** an associate professor of pediatrics, for studies of infant nutrition; $1,000 from a private citizen to **Dr. Carroll Larson,** professor and head of orthopedic surgery, for research in his specialty; $500 from another individual to **Dr. Paul Seebohm,** professor of internal medicine, for allergy research; and $4,347 from Bristol Laboratories, Inc., to **Dr. Smith** for clinical studies of synthetic penicillin.

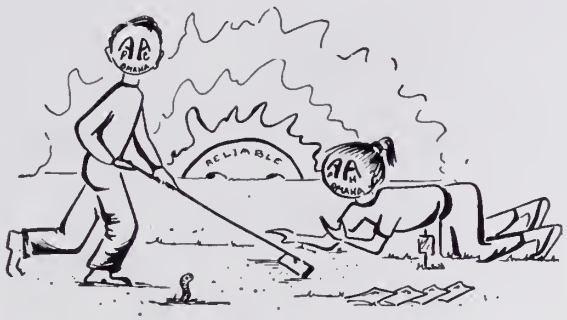
William Eller, Jr., son of **Dr. William C. Eller,** who moved recently from Waterloo to Fort Lauderdale, Florida, was one of the victims of the Northwest Air Lines plane crash in southern Indiana last month. The boy was attending a preparatory school in Minnesota.

Dr. Otto Wurl, an assistant professor of medicine at Creighton University, Omaha, was guest speaker at the Woodbury County Medical Society meeting on March 24 at Sioux City. He spoke on "Management of Hypertension."

Dr. P. J. Leinfelder, professor of ophthalmology at SUI, has been invited by the Japanese Ophthalmological Society to be its "international guest" at the annual meeting of the Society April 6-8 in Nagasaki. Dr. Leinfelder is the second American to receive the honor in recent years.

At the meeting Dr. Leinfelder will present a paper dealing with his research on radiation injuries to the lens of the eye. These studies have been conducted in collaboration with **Drs. Titus Evans** and **Edgar Riley** of the University's Radiation Research Laboratory, and **Dr. Richard Richards,** an assistant professor of ophthalmology at SUI.

While in Japan, Dr. Leinfelder will visit universities and medical schools in Tokyo, Nagasaki, Okayama and Tokushima and will also be a guest of the Atom Bomb Casualty Commission facilities in Nagasaki and Hiroshima. The commission is a joint U. S.-Japanese group which was created to conduct medical studies and follow-ups on victims of the World War II atomic bombings of the two cities.



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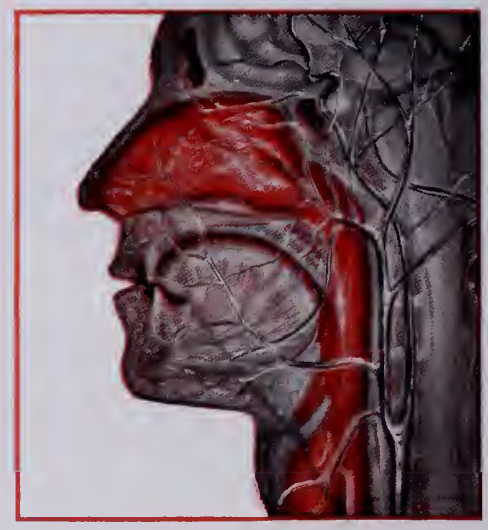
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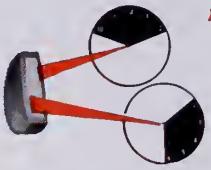
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1. Fabricant, N. D.: E.E.N.T. Monthly *37*:460 (July) 1958.
2. Lhotka, F. M.: Illinois M. J.: *112*:259 (Dec.) 1957.
3. Farmer, D. F.: Clin. Med. *5*:1183 (Sept.) 1958.

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BEER AND BLOOD CLOTTING

According to G. R. Fearnley, *et al.*, in an article published recently in LANCET,* beer may induce a profound reduction of coagulation in the blood of healthy persons. In 12 out of 16 persons who participated in the study, the drinking of one pint of bottled beer was followed by pronounced lengthening of blood clotting time two hours later; in three persons, there was a small but insignificant prolongation; and the remaining subject was not affected.

Whiskey in a dose of 2 oz. had no significant effect on blood coagulation time in six of the subjects who had shown a pronounced response to beer. Absolute alcohol, also administered in the study, yielded inconclusive results.

The investigators, all associated with the Gloucestershire Royal Hospital, undertook the study following their observation that an unusual prolongation of clotting time occurred in a few patients who later were found to have had a glass of beer each, some three hours before the test.

Initial experiments were conducted on a man and a woman. The clotting times of both were greatly prolonged on the days on which they drank beer (one and two pints), cider or white wine, but were not altered significantly after their drinking gin, whiskey or absolute alcohol. "The prolongation after ingestion of drinks in the former group was of the order of 300 per cent," the report said.

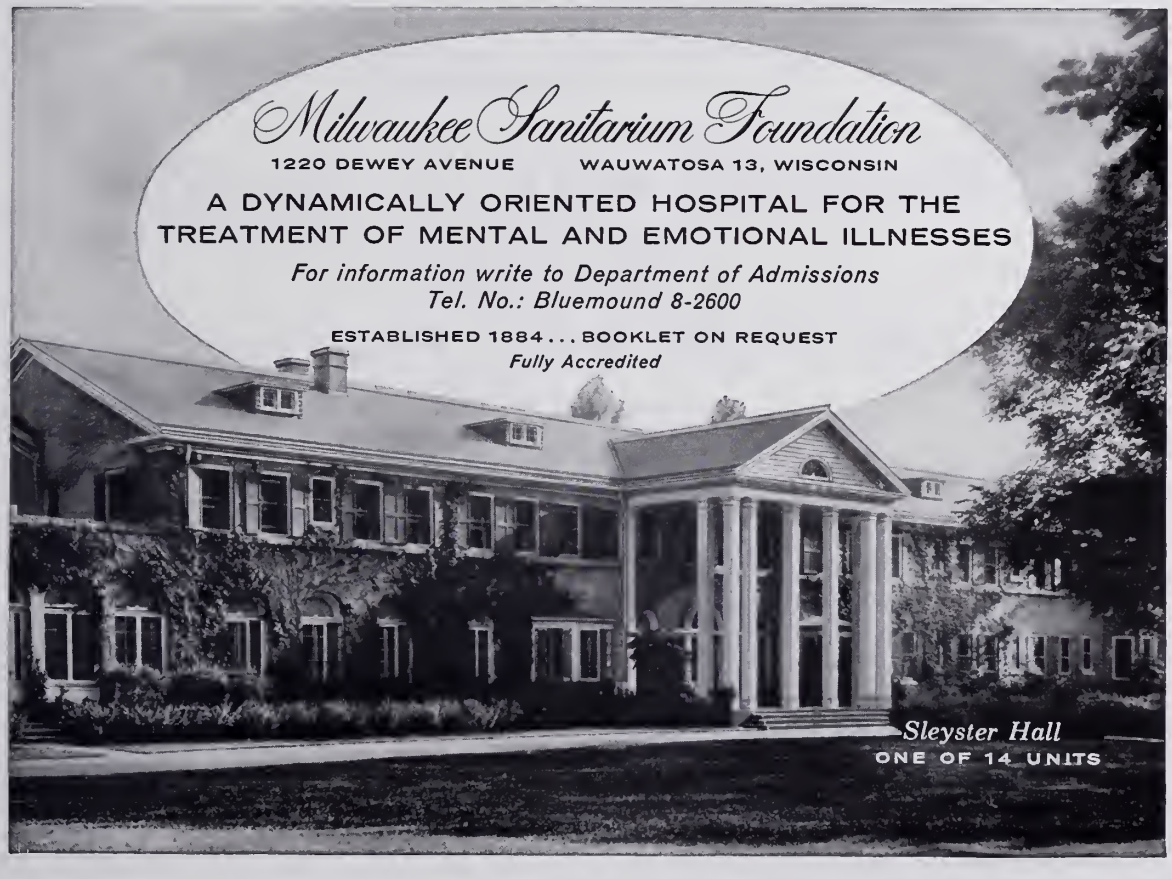
Experiments then were conducted to determine the time and duration of the effect of one pint of beer. Blood specimens were obtained two, four and six hours after the ingestion of beer. The reduction of coagulation activity was greatest at two hours; in the man, the clotting time returned to a near-resting level at four hours, but in the woman it was still elevated at four hours, and fell to near the resting level at six hours.

Further experiments in 10 men and four women followed the original study.

Most, although not all, of the persons tested showed a distinct prolongation of clotting time and a reduction of blood coagulation activity after drinking a pint of beer. The quantity of beer used was moderate, "even small compared with the quantities consumed by some habitual beer drinkers," the investigators pointed out. Whiskey in a dosage of approximately the same alcoholic content as the beer apparently had no effect. White wine and cider in two experiments appeared to have an effect comparable with that of beer.

"These results suggest that some substance produced during fermentation and absent from distilled liquors may reduce blood fibrinolytic activity," the authors concluded.

* Fearnley, G. R., *et al.*: Effect of beer on blood fibrinolytic activity. LANCET, **1**:184 ff., (Jan. 23) 1960.



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DEATHS

Dr. Augustus Sinning, 95, of Iowa City, died February 23 in a Wilton Junction nursing home, where he had been a patient for the last four years. Dr. Sinning had practiced in Iowa City for 45 years and was a Life Member of the Iowa State Medical Society.

Dr. Cleanthus E. Birney, 89, a physician in Estherville for more than 65 years, died at Holy Family Hospital, February 17, after a short illness. Dr. Birney was a Life Member of the Iowa State Medical Society.

Dr. Forest Frank Hall, 73, a Webster City physician, died in a hospital there on February 13 after a lengthy illness.

Dr. Daniel J. Glomset, 78, a widely known Des Moines heart specialist until he retired several years ago, died February 29 at Iowa Methodist Hospital in Des Moines. He was a Life Member of the Iowa State Medical Society.

Dr. Robert C. Knott, 59, a former Sioux City physician, died February 26 at Eugene, Oregon. He had moved to Eugene in 1945.

Dr. Marshall E. Dingman, 81, of Urbana, died March 1 at Mercy Hospital, Cedar Rapids. Dr. Dingman had practiced in Urbana for 57 years.

Dr. Jacob J. Sybenga, 73, of Pella, died of cancer on March 3 at his home there. Dr. Sybenga had practiced in Pella and environs for 48 years.

Dr. Clinton E. Mershon, 89, of Iowa City, died March 7 of a heart attack at his home there. He practiced medicine at Adel for 57 years until retiring and moving to Iowa City two years ago.

AMA FIFTY-YEAR CLUB

Dr. J. H. McCurry, of Cash, Arkansas, has secured approval for the organization of a Fifty-Year Club within the AMA. He is anxious to hear from physicians who have been in practice 50 years or more and who desire to become members of such a group.

The first meeting of the new organization will be held in Washington, D. C., at the time of the AMA Clinical Meeting, November 29-December 2, 1960.

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overstimulation, or barbiturate hangover.

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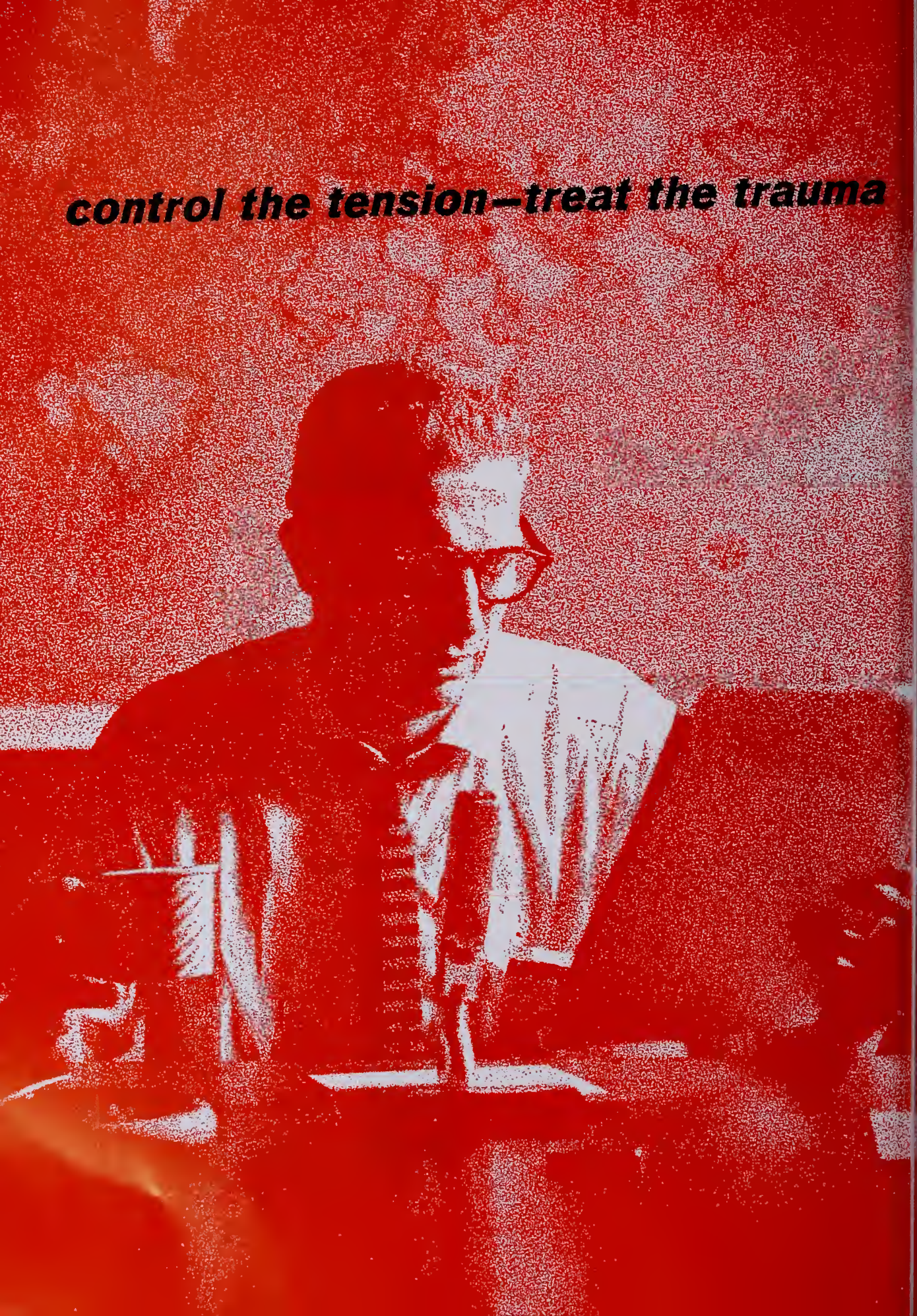
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THE STATE EMPLOYMENT SERVICE AND THE MEDICAL ASSISTANTS

Beginning in March, 1959, in cooperation with the ISMS Doctors Assistants Advisory Committee, and the Iowa Association of Medical Assistants, the Iowa State Employment Service has made considerable efforts to improve its service to physicians who are seeking office personnel. Early this year, a check was made of Employment Service activities during 1959. For the period of April 1 to July 17, 1959, the check showed that 112 job orders for technical workers were received, and 64 of those job orders were filled by the Iowa State Employment Service.

The list of occupations has been expanded to coincide with the occupations used in a booklet being developed on job opportunities in this field. The 35 local ISES offices placed a total of 463 workers from July 17 through December 31, 1959, in private offices, clinics and hospitals. These placements were in occupational classifications from the following list:

1. Registered, licensed and practical nursing
2. Nurse aides and orderlies
3. Medical technology
4. Hospital administration
5. Anesthesiology
6. Physical therapy
7. Occupational therapy—recreational directors
8. Radiology and x-ray technology
9. Medical social work
10. Medical secretary
11. Medical illustration, sculpturing, models
12. Medical photography
13. Recruitment of personnel & public relations
14. Science librarian and/or medical librarian
15. Medical records librarian
16. Drug detailing and/or selling
17. Public health—administration, vital statistics, epidemiology, preventive medicine and hygiene, sanitation
18. Research
19. Medical assistant—doctor's office and clinic
20. Hospital purchasing
21. Hospital pharmacy—retail—industrial
22. Executive housekeepers
23. Biostatistics
24. Science news reporting, writing, editing, photography, etc.
25. Microbiology
26. Sanitary engineers
27. Psychologists

The ISES is not yet satisfied with its service to doctors and health institutions but is convinced that it is improving that service. The primary difficulty is in the shortage of workers. It hopes that the booklets on job opportunities in the medical field which are being distributed to schools and

immortals of chinese mythology:



Ho Hsien-Ku

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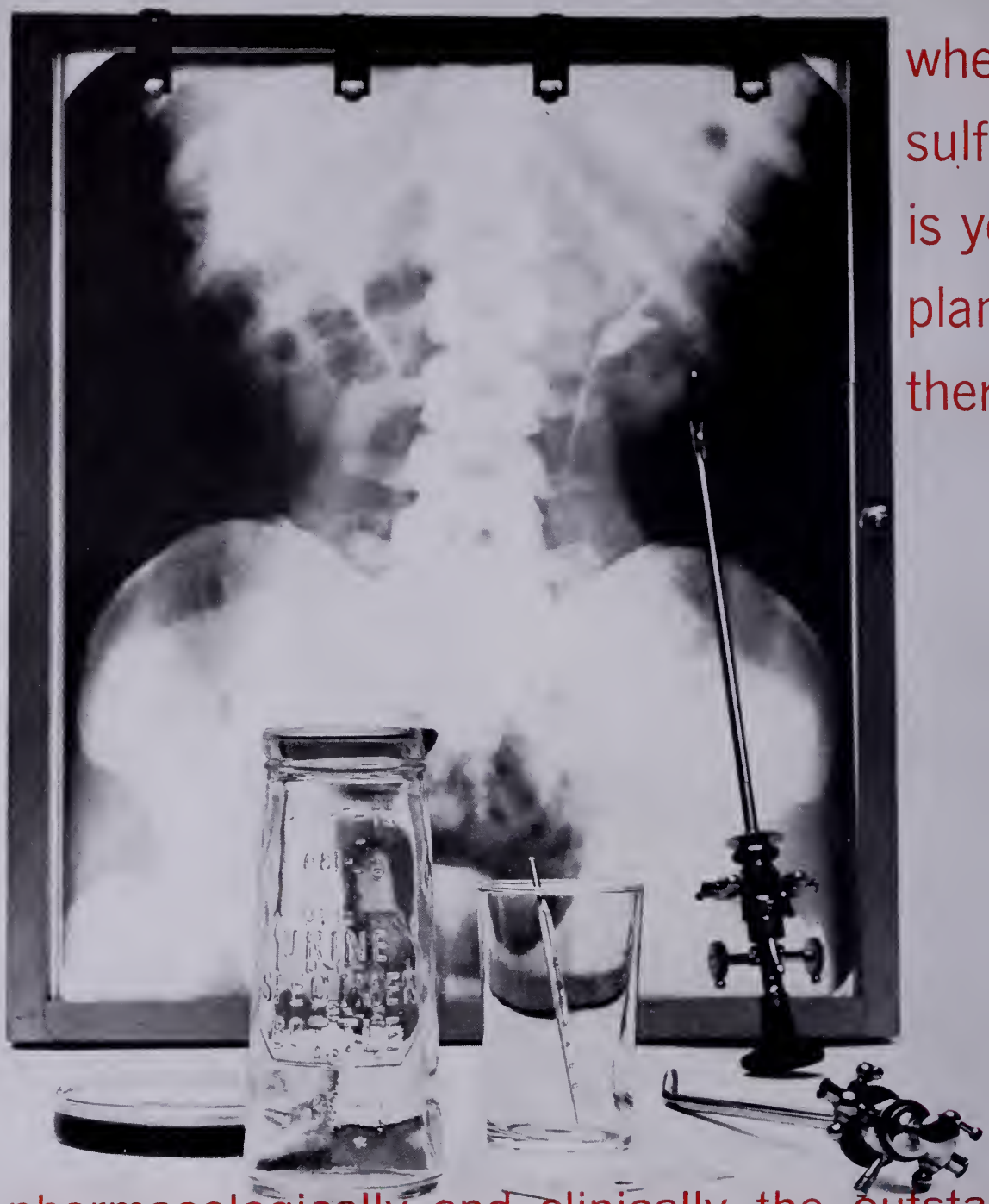
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Successful against these organisms: strept cocci, staphylococci, E. coli, A. aerogenes, paracol bacillus, Gram-negative rods, pneumococci, diphth roids, Gram-positive cocci and others.

1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378, (Nov.) 1956. 2. Boger, W. P.: Antibiotics Ann 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & C Ther. 5:604 (Oct.) 1958. 4. Vinnicombe, J.: Ibid. 5:474 (July) 1958. 5. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1 (Sept.) 1959. 6. Roepke, R. R.; Maren, T. H., and Mayer, E.: Ann. New York Acad. Sc. 60:457 (Oct.) 1957.



once-a-day sulfa...

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colleges, as well as used by ISES local-office employment counselors, will help alleviate the situation.

Coming Meetings

(Continued from page 210)

May 16-19	**Annual Meeting National Tuberculosis Association-American Trudeau Society.** Statler-Hilton and Biltmore Hotels, Los Angeles
May 16-20	**Current Research in Cardiovascular Disease (American College of Physicians).** Clinical Center Auditorium, National Heart Institute, Bethesda, Maryland
May 16-20	**Medical Library Association, Inc.** Muehlebach Hotel, Kansas City
May 16-21	**American Association of Mental Deficiency.** Lord Baltimore Hotel, Baltimore
May 16-27	**Basic Electrocardiography.** Cook County Graduate School of Medicine, Chicago
May 16-27	**Board of Surgery Review, Part II.** Cook County Graduate School of Medicine, Chicago
May 16-27	**Obstetrics, General and Surgical.** Cook County Graduate School of Medicine, Chicago
May 16-27	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
May 17-19	**Massachusetts Medical Society.** Statler-Hilton Hotel, Boston
May 17-19	**Ohio State Medical Association.** Sheraton Cleveland Hotel, Cleveland
May 17-19	**South Carolina Medical Association.** Ocean Forest Hotel, Myrtle Beach
May 17-20	**American Association of Plastic Surgeons.** Milwaukee Inn, Milwaukee
May 18-20	**Ogden Surgical Society.** Ogden, Utah
May 20-22	**1960 Annual Convention American College of Nutrition.** Huntington-Sheraton Hotel, Pasadena
May 23-25	**Annual Meeting and Scientific Session, California Heart Association.** Claremont Hotel, Berkeley
May 23-25	**Minnesota State Medical Association.** Kahler Hotel, Rochester
May 23-26	**Surgery.** University of Kansas School of Medicine, Kansas City
May 23-26	**The Hypertensive Diseases: Diagnostic and Therapeutic Procedures in Essential, Adrenal and Renal Hypertension (The American College of Physicians).** Evans Amphitheater, Boston
May 23-27	**Breast and Thyroid Surgery.** Cook County Graduate School of Medicine, Chicago
May 23-27	**Diseases of the Chest.** Cook County Graduate School of Medicine, Chicago
May 23-27	**General Surgery.** Cook County Graduate School of Medicine, Chicago
May 23-27	**Proctology for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
May 23-28	**Asian-Pacific Congress of Cardiology.** Melbourne, Australia
May 24-27	**Illinois State Medical Society.** Hotel Sherman, Chicago
May 30-June 1	**American Gynecological Society.** Williamsburg Inn, Williamsburg, Va.
May 30-June 2	**American Orthopaedic Association.** The Homestead, Hot Springs, Va.
May 30-June 3	**Pediatric Advances (Children's Hospital of Philadelphia and Graduate School of Medicine, University of Pennsylvania).** The Children's Hospital, Philadelphia

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SUPPLIED—as white, coated, 350 mg. tablets, bottles of 50; also available for pediatric use: 250 mg., orange capsules, bottles of 50

1. Kestler, O.: In The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. 2. Berger, F. M.; Kletzkin, M.; Ludwig, B. J.; Margolin, S., and Powell, L. S.: J. Pharm. Exp. Ther. *127*:66 (Sept.) 1959. 3. Spears, C. E. and Phelps, W. M.: Arch. Pediat. *76*:287 (July) 1959. 4. Phelps, W. M.: Arch. Pediat. *76*:243 (June) 1959. 5. Friedman, A. P.; Frankel, K., and Fransway, R. L.: Papers presented at Scientific Meeting, New York State Society of Industrial Medicine, Inc., New York, Sept. 30, 1959. 6. Kuge, T.: Unpublished reports. 7. Ostrowski, J. P.: Orthopedics *2*:7 (Jan.) 1960.

Literature and samples on request

Also available on request: The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. (185 pages)

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MEDICAL SEMINAR CRUISE

The Duke University School of Medicine is again offering doctors a chance to combine postgraduate study with an overseas vacation. This year's Duke cruise will take doctors to the Baltic, visiting Le Havre, Cuxhaven, Leningrad, Helsinki, Stockholm, Copenhagen and Hamburg. The cruise ship will leave New York City on June 8, and the trip will terminate in Hamburg on June 28. Some of the doctors will remain in Europe thereafter for further vacationing, and others will return immediately to the United States by ship or air.

Shipboard lectures will be given on various subjects in medicine, pediatrics and thoracic surgery. Arrangements are also being made for lectures in the medical centers at Leningrad, Helsinki, Stockholm and Copenhagen. The medical program has been approved by the American Academy of General Practice for Category I credit.

For additional information, write to Dr. W. M. Nicholson, assistant dean in charge of postgraduate education, Duke University, Durham, North Carolina.

TRUDEAU SCHOOL OF TUBERCULOSIS

The Trudeau School of Tuberculosis and Other Pulmonary Diseases, at Saranac Lake, New York, will conduct its 45th Session from June 6 to 24, 1960. The tuition is $100.

In addition to the local medical faculty consisting of some 40 doctors from Saranac Lake, Ray Brook State Tuberculosis Hospital and Sunmount Veterans Administration Hospital, about 30 of the leading teachers and investigators in eastern United States and Canada are brought there to conduct seminars in their special fields. Approximately half of the time is devoted to tuberculosis, and the other half is divided among such subjects as silicosis, pulmonary fibrosis, emphysema, fungus infection, sarcoidosis, pneumonias and intrathoracic tumors.

The Trudeau School provides doctors a chance to combine an educational experience with an enjoyable holiday in a beautiful part of the Adirondacks, among pleasant companions. The enrollment is limited, and applications should be made early. All inquiries should be addressed to the secretary, Trudeau School of Tuberculosis and Other Pulmonary Diseases, Box 500, Saranac Lake, New York.

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Journal of the IOWA STATE MEDICAL SOCIETY

Vol. L MAY, 1960 No. 5

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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Entered as second-class matter at the post office at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



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It is fully expected that Aldactone will change present medical concepts of the therapeutic limitations of managing edema. Many patients living in a greater or lesser state of edematous invalidism can now be edema-free. To others, gravely ill, Aldactone will be life-saving.

When used alone, Aldactone will produce a satisfactory diuresis in about half of those patients whose edema is resistant to conventional diuretic agents.

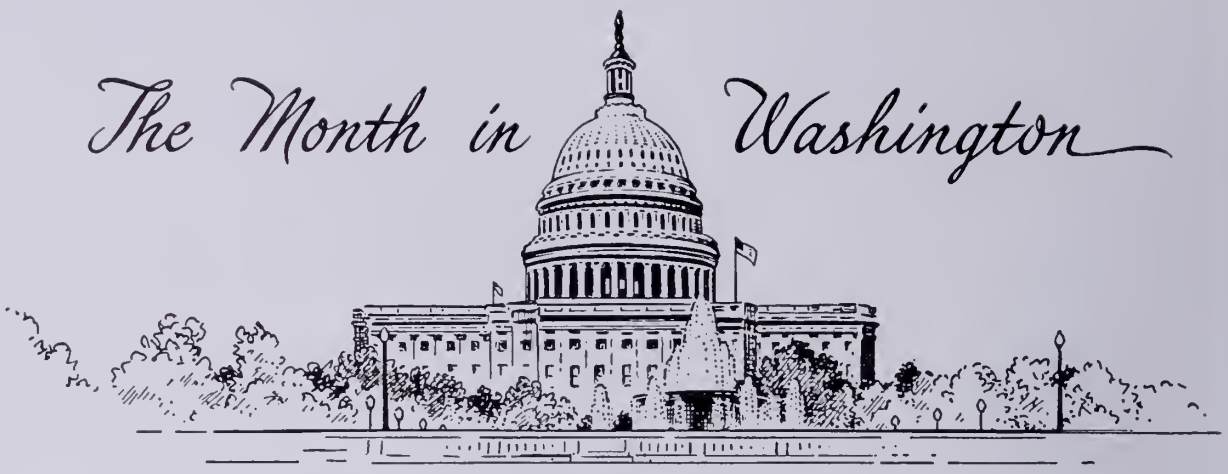
When Aldactone is used in a comprehensive therapeutic regimen, which includes a mercurial or a thiazide diuretic, a satisfactory diuresis and relief of edema may be expected in approximately 85 per cent of edematous patients *who would not otherwise respond.*

DOSAGE: For most adult patients the optimal dosage of Aldactone, brand of spironolactone, is 100 mg. four times daily. Aldactone should be administered for at least four or five days before appraising the initial response, since the onset of therapeutic effect is gradual when it is used alone. Aldactone manifests accelerated activity with greater response as early as the first and second days when used in combination with a mercurial or thiazide diuretic.

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The Month in Washington



Washington, D. C.—Defeat of the Forand Bill in the House Ways and Means Committee highlighted developments on the issue of legislation to provide more federal health care for the aged.

The Committee voted 17 to 8 on March 31 to shelve the Forand Bill which would increase Social Security taxes to provide surgical benefits and limited hospitalization and nursing home care for Social Security beneficiaries, except the disabled.

However, the issue remained very much alive.

The Eisenhower Administration and congressmen were separately considering various alternative proposals to provide additional health care for the aged, but outside the Social Security system. And the action of the House Committee did not rule out the possibility of Forand-type legislation being brought up in the Senate later this session.

The House Committee vote against the Forand Bill came during the drafting of an omnibus measure of revisions in the Social Security program. The Committee voted tentatively to bring physicians under Social Security.

The Committee also favored elimination of the requirement that a disabled person must be 50 years or older to be eligible for Social Security payments.

Arthur S. Flemming, Secretary of Health, Education and Welfare, said the Administration was considering a plan for federal payments to the states to help needy old persons buy private health insurance on a voluntary basis. He said he hoped the plan would be ready for submission to Congress by late April.

Sen. Jacob K. Javits (R., N. Y.) and seven other Republican senators introduced similar legislation in the Senate. The bill called for the federal government and states jointly putting up about $1 billion a year to help persons 65 years and older, and their spouses, to buy private health insurance. The coverage would include physicians' care in home and office, diagnostic services, hospitalization and nursing home care.

Another plan being considered by some other members of Congress would broaden the federal-state public assistance program to provide more health care for needy older persons.

Both President Eisenhower and Vice President Nixon reiterated their opposition to any compulsory health plan such as the Forand Bill. The President told a news conference that such plans would be a definite step toward socialized medicine. He proposed that medical care for the aged be improved through further development of voluntary health insurance programs.

Vice President Nixon gave his position in a letter to physicians who had communicated with him about the matter.

"The Vice President, throughout his career as a public official, has consistently opposed and will continue to oppose any compulsory health insurance program," the letter said. "This, of course, includes the Forand Bill. . . ."

"He believes that the best way to handle the problem of people over 65 who do not have and cannot afford health insurance is through a program which will enable those who desire to do so to purchase health insurance on a voluntary basis."

On the other side, three candidates for the Democratic nomination for President—Senators John F. Kennedy (Mass.), Hubert H. Humphrey (Minn.) and Stuart Symington (Mo.)—said they would push for passage of Forand-type legislation.

The AFL-CIO continued its all-out campaign in support of the Forand Bill. Leaders of the labor union repeatedly attacked the American Medical Association for opposing the Bill. One of the attacks prompted Dr. Louis M. Orr, president of the AMA, to protest in a letter to AFL-CIO president George Meany against the union's "deliberate distortions of the truth, perversions of the truth, and outright untruths."

Dr. Orr charged that allegations in a political

memorandum of the AFL-CIO's Committee on Political Education (COPE) "not only . . . attempt to impugn the motives and competence of the nation's physicians, but they seek to mislead labor's rank and file, the members of Congress, and the American people as a whole."

"When the AMA opposes any legislative health measure, it does so because its members believe that it would lead to poorer—not better—health care for the people of this country," Dr. Orr said.

Senate Republican leader Everett M. Dirksen (Ill.) also defended the AMA as well as the Eisenhower Administration, against the attacks when AFL-CIO leaders repeated them in testimony before the Senate Subcommittee on Problems of the Aged and Aging.

Senator Dirksen denounced them as "gratuitous slurs," "stinking statements," "invidious . . . insane charges" which constituted "an absolute disservice to the country."

Dr. James A. Appel, Lancaster, Pa., a member of the AMA Board of Trustees, testified before the Senate Subcommittee that the greatest health problem faced by older people is "their isolation from the rest of society." He said:

"The health problems of the aged can only be solved within the context of total health. They involve far more than hospitals or a doctor's care. They involve the older person's other requirements in life, whether these be housing, recreation, community understanding and acceptance, the right to be useful, the courtesy of being treated as individuals, or the opportunity of living as self-reliant, respected members of society."

As for an aged person's being denied medical care because of a lack of money, Dr. Appel said emphatically:

"Medical care is available to every man, woman, and child in the United States regardless of his or her ability to pay for it.

"That care is not now denied, nor will it be denied."

BLUE CROSS TO TAKE NATIONWIDE ACCOUNTS

The 79 local U. S. Blue Cross plans and the four Canadian plans have voted unanimously to set up a super organization to write hospital insurance coverages for U. S. government employees and the personnel of firms whose operations are scattered among several states. The action is subject to approval by the American Hospital Association's House of Delegates, which will meet on August 29 in San Francisco.

Blue Cross officials said that local authority of the individual Blue Cross plans would not be affected. When approved and instituted, the new organization would prod the local plans into accepting national accounts on the terms that the national had been able to secure. Should a local plan be unwilling to cooperate, the national organization could write the nationwide policies anyway.

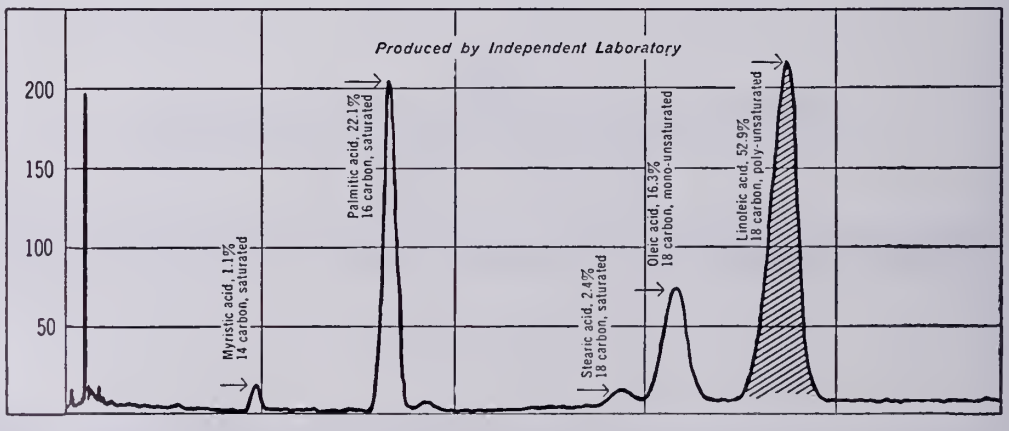
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Excerpted from J.A.M.A., Aug. 29, 1959

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Total tocopherols	0.09-0.12%

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To be effective, a diet must be *eaten* by the patient. The majority of housewives prefer Wesson,* particularly by criteria of odor, flavor (blandness) and lightness of color.

Uniformity you can depend on. Wesson has a poly-unsaturated content better than 50%. Only the lightest cottonseed oils of highest iodine number are selected for Wesson, and no significant variations in standards are permitted in the 22 exacting specifications required before bottling.

*Reconfirmed by recent tests against the next leading brand with brand identifications removed, among a national probability group.



Personals



Dr. Sidney L. Sands, a Des Moines psychiatrist, is the author of a new book recently published by the Christopher Publishing House, Boston. The book, entitled GROWING UP TO LOVE, SEX AND MARRIAGE, attempts to establish a "philosophy of marriage" based upon broad concepts of man's nature and potentials as a bio-social organism.

Dr. R. L. Feightner, of Fort Madison, was a patient several weeks ago at Monroe General Hospital, Key West, Florida. He sustained a broken right leg in an accident while on a fishing trip off the Florida Keys on March 17. Dr. Feightner, who has a winter home in Fort Myers, Florida, was preparing to board a boat at Dry Tortugas Island, 100 miles west of Key West, when he apparently slipped and fell. With him at the time of the accident were **Dr. F. L. Poepsel,** of West Point, and a physician from the Mayo Clinic.

Dr. Donald H. Kast, of Des Moines, was elected to a three-year term on the board of directors of the American Academy of General Practice at its national convention in Philadelphia, March 21-24. Dr. Kast is a former president and secretary of the Iowa chapter of the Academy, which for the second successive year won the award for showing the biggest increase in membership.

Dr. William Requarth, assistant professor of surgery at the University of Illinois College of Medicine, spoke at the March 10 meeting of the Linn County Medical Society on the subject of "The Treatment of Traumatic Wounds." The program also included slides and a movie on the care of such injuries as commonly occur in the home, farm and industry.

An immunization clinic for school children was held at New London, Iowa, on March 8, with **Dr. H. M. Readinger** administering shots for small pox, whooping cough, diphtheria, tetanus and polio. Children who will begin school this fall were also included in the program.

Dr. W. C. Brinegar, superintendent of the Mental Health Institute at Cherokee, was a speaker at a meeting of Commissioners of Mental Health and Mental Hospital Superintendents in Battle Creek,

Doctor . .

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Michigan, March 17-19. His talk dealt with the subject "Legal Aspects of the Operation of State Hospitals Under Catastrophic Conditions, Including Nuclear Attacks." The meeting was held in connection with civil and defense mobilization.

A total of 2,455 persons received polio shots in Hamilton County the week of March 21 at clinics sponsored by the Hamilton County Medical Society. Members of the Medical Society donated their services for the clinics which were held at Jewell, Blairsburg, Stanhope, Webster City and Williams. Vaccine was furnished by the Iowa State Department of Health.

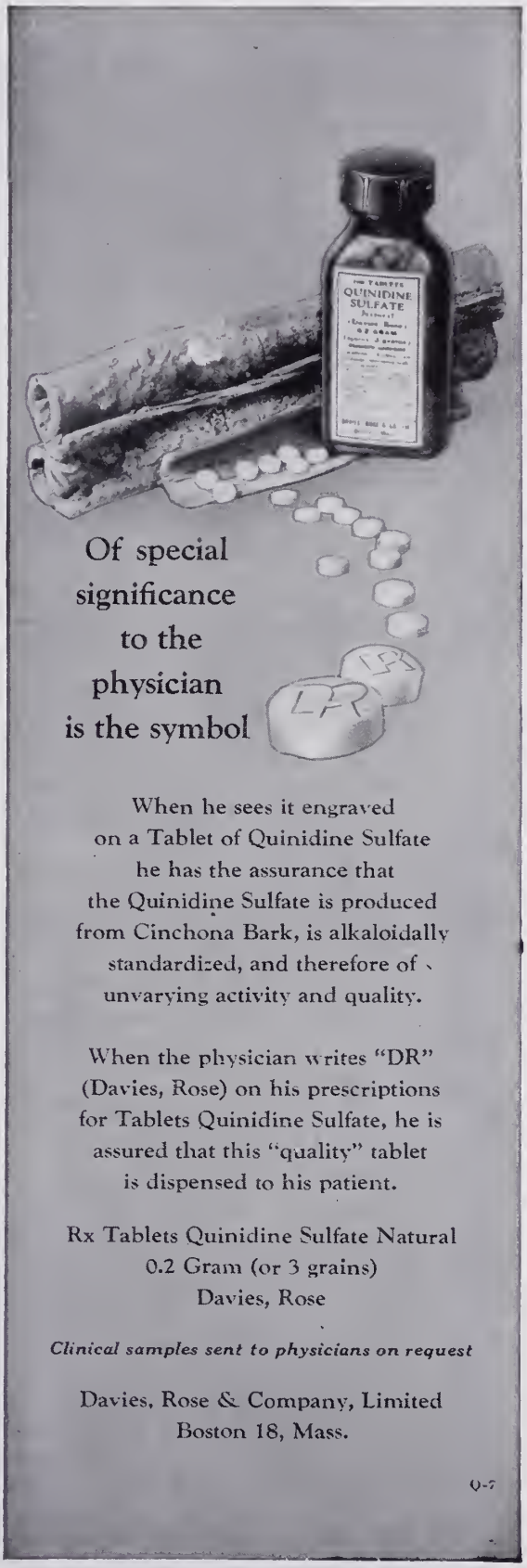
Dr. Harry Levinson, director of the Menninger Foundation's division of Industrial Mental Health, spoke at a March 26 luncheon meeting of the "Mental Health in Industry" Conference in Davenport. Dr. Levinson is recognized as the nation's foremost authority on industrial psychology.

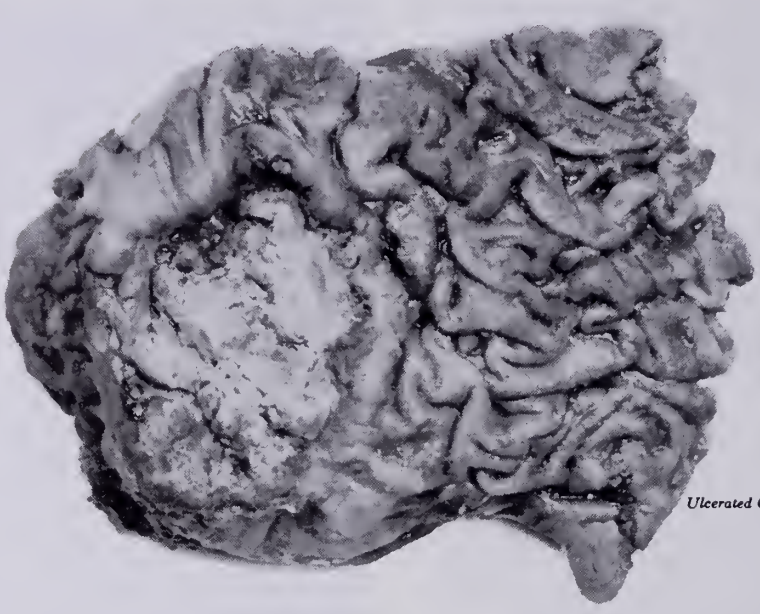
The Iowa-Nebraska Post-Graduate Medical Assembly will hold its sixth annual symposium on Thursday, May 5, at the Chieftain Hotel, Council Bluffs. **Dr. Rubin H. Flocks,** professor and head of the Department of Urology at SUI, will be among the panelists who discuss the theme of the symposium—"Care of the Aged."

Dr. William B. Bean, professor and head of the Department of Internal Medicine at SUI, toured medical facilities and lectured at Baylor University School of Medicine in Houston, March 21-25. Later in March, Dr. Bean participated in the Annual Medical Assembly at St. Joseph Hospital in Burbank, California.

Dr. Dean M. Lierle, professor and head of the Department of Otolaryngology and Maxillofacial Surgery at SUI, has been named recipient of the tenth "deRoaldes Award" for "achievement in rhinology and laryngology." The award, named for the late **Dr. A. W. deRoaldes,** a former president of the American Laryngological Association, is the second which the organization has conferred upon Dr. Lierle. In 1956 he received the Newcomb Award, which is given annually to a fellow of the Association "presenting the most outstanding contribution to the literature of laryngology during the previous calendar year."

At a March meeting of the National Health Council on Aging which was held in Miami, Mar-





Ulcerated Carcinoma of the Stomach

what's new in the treatment of cancer?

Fifteen cancer authorities discuss latest advances in treatment of malignancies in a combined symposium and panel discussion at 9 a.m., June 15, in the Miami Auditorium. This is one of three sessions the A.M.A. Section on General Surgery presents at the Annual Meeting in Miami Beach June 13—17. More than 300 scientific presentations are scheduled.

The Symposium:

Recent Advances in the Treatment of the Cancer Patient

Warren H. Cole, Chicago, President, American Cancer Society; Head, Department Surgery, University of Illinois: "*An Introduction to the Problem*".

Charles L. Eckert, Albany, N. Y., Chairman, Department of Surgery, Albany Medical College: "*Extended Surgical Procedures in Treatment of Cancer.*"

George E. Moore, Buffalo, N. Y., Director, Roswell Park Memorial Institute: "*Modification of Host Resistance to the Growth of Malignant Cells.*"

Anthony R. Curreri, Madison, Wis., Director, University Cancer Research Hospital; and by

Lyndon E. Lee, Washington, D. C., Coordinator, Vet. Adm. Program on Cancer Chemotherapy: "*Status of Adjunct Cancer Chemotherapy.*"

John D. Hurley, Milwaukee, Assistant Director of Surgery, Milwaukee County Hospital: "*Chemotherapy of Solid Cancer.*"

William R. Richardson, Oklahoma City, Professor of Pediatric Surgery, University of Oklahoma: "*Newer Techniques of Managing Neoplasms in Infants and Children.*"

Benedict R. Walske, Omaha, Neb., Chairman, Department of Surgery, Creighton University: "*Effects of Radioactive Iodinated Tetracycline on Growth of Neoplasms.*"

R. Lee Clark, Houston, Director and Surgeon-In-Chief, University of Texas: "*Local Perfusion Techniques in Chemotherapy of Inoperable Cancer—Indications, Methods and Results.*"

The Panel Discussion:

Current Status of Treatment of Advanced Cancer of Thyroid and Breast

WARREN H. COLE, Chicago, Moderator
WALTER T. MURPHY, Buffalo, N. Y.
GEORGE CRILE, JR., Cleveland, Ohio
JOSEPH FARROW, New York City
BRONSON S. RAY, New York City
ARTHUR JAMES, Columbus Ohio
FRED ANSFIELD, Madison, Wis.

ANNUAL MEETING,
Miami Beach, Florida
June 13-17, 1960

Advance hotel and meeting registration forms appear in the first issue of JAMA each month, beginning in February.

AMERICAN MEDICAL ASSOCIATION
535 North Dearborn Street, Chicago 10, Illinois

garet A. Ohlson, professor and head of nutrition at SUI, presented a paper on "Research in Nutrition of the Aged." The meeting was held to consider topics on aging for next year's White House Conference on Aging.

Dr. Daniel Glomset, of Des Moines, was named to represent Iowa on the governing body of the American Society of Internal Medicine at its annual meeting in San Francisco, April 1-3. He attended the meeting as a delegate from the Iowa Society of Internal Medicine.

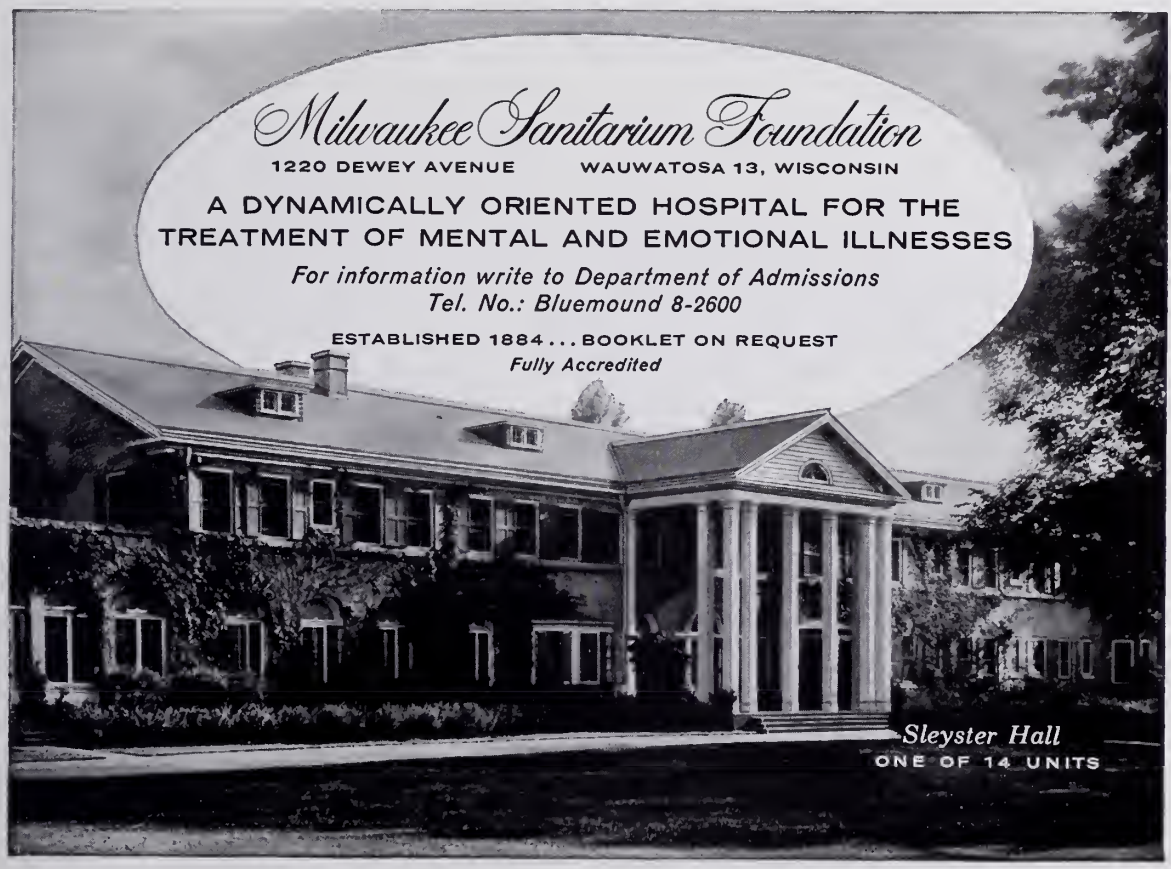
Dr. Warren DeKraay, a resident doctor at the University Hospitals at Iowa City, assumed the medical duties of **Dr. H. M. Andersen,** of Strawberry Point, while that doctor attended a meeting of the Minnesota Mediclinics at Fort Lauderdale, Florida, March 5-17.

Dr. Joe Byers, who is serving his internship at Mercy Hospital in Des Moines, has announced his intention of setting up a medical practice in Danbury after completion of his internship July 1. Danbury has been without a doctor since **Dr. L. E. Harrington** moved to Atchison, Kansas, last fall.

About 75 physicians from an eight-state area attended the annual Veterans Administration area surgical conference in Des Moines, March 29. The doctors heard talks on surgical problems by **Dr. Eugene S. Brintnall,** chief of surgical services at the VA hospital in Iowa City, and **Dr. Eugene Ittzes,** chief of surgical services at the VA center in Hot Springs, S. D. Most of the doctors attending were members of surgical services at 21 VA hospitals in Iowa, Minnesota, Montana, Nebraska, North and South Dakota, Wisconsin and Wyoming although this year physicians in the Polk County area were also invited to attend.

Dr. Dale L. Christensen, of Lake City, has recently become a partner in the McCrary-Rost Clinic. He has been employed at the clinic since September, 1958.

Numerous live vaccines may be expected in the future, even those which incorporate all three types of poliomyelitis, **Dr. Edward B. Shaw,** professor and head of pediatrics at the University of California Medical Center in San Francisco, said recently in Des Moines. Dr. Shaw, delivering the fourth annual Lee Forrest Hill lecture at a pediatric conference of the Raymond Blank Hospital Association, said that present measures against



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polio are "good, but will be better." A measles vaccine also "seems to be on the threshold of introduction," he said. "The appalling encephalitic complications of the disease, however, encourage us to hope that successful vaccination will shortly be realized."

The dedication ceremonies and open house of the Cascade Medical Center were held on Sunday, April 3. **Mr. Leonard Wolf,** U. S. Representative from the Second District, was the principal speaker at the program held in the American Legion Pavilion. **Mr. Norman Davis,** director of the medical programs for the Sears-Roebuck Foundation also spoke.

Dr. William Mehrl began practice at the Medical Center April 4. He has been practicing in Manchester for the past 5½ years.

Dr. George Smiley, medical adviser and superintendent of Sunnyslope Sanatorium at Oakdale and **Mr. Claude W. Sankey,** of Clarion, Wright County superintendent of schools, received awards at the annual dinner of the Iowa Tuberculosis and Health Association and Iowa Trudeau Society, on April 7 in Des Moines. Mr. Sankey, who has been active in Iowa Tuberculosis Association work for many years, received the 1960 Frances Brophy Award. Dr. Smiley was given the Walter L. Bierring Award.

Dr. **James F. Speers,** Des Moines-Polk County health director, was chosen president-elect of the Iowa Trudeau Society at the annual meeting of that body on April 6. Other officers named were: **Dr. George N. Bedell,** Iowa City, vice-president; and **Dr. Mary Beth Dewey,** Iowa City, who was re-elected secretary-treasurer. Elected to the board of directors were: **Dr. Paul M. Seebohm,** Iowa City, retiring president; **Dr. Leon J. Galinsky,** Des Moines; **Dr. Ralph E. Smiley,** Mason City; **Dr. Sidney F. Yugend,** Indianola; and **Dr. Franklin H. Top,** Iowa City.

A Des Moines Medical Forum discussion "How to Enjoy Your Later Years More" was held Wednesday, April 27, at KRNT Theater. **Dr. Sidney L. Sands,** Des Moines psychiatrist, was moderator of a panel discussion. The panel included **Dr. Harold W. Saunders,** professor and chairman of sociology and anthropology at SUI; **Mrs. Eleanor Carris,** director of standards and procedures with the State Department of Social Welfare in Des Moines; **Dr. William de Gravelles,** director of the Younker Rehabilitation Unit at Iowa Methodist Hospital; and **Dr. William J. Morrissey,** Des Moines internist and chairman of the Polk County Medical Society's Committee on Aging.

Dr. R. E. Clark, of Manchester, has been appointed by the county Board of Supervisors to succeed **Dr. William J. Mehrl** as county coroner. Dr. Mehrl recently moved from Manchester to Cascade. Coroners in Delaware County serve by appointment rather than by election.

Dr. Louis T. Palumbo, chief of the surgical service at Veterans Hospital, Des Moines, was presented with a certificate of commendation for outstanding contributions to the Veterans Administration medical program, at a conference on Tuesday, March 29. The certificate was presented by **Dr. William S. Middleton,** chief medical director for the Veterans Administration, who praised Dr. Palumbo's work as a teacher and author of works containing "original concepts in surgery." Dr. Palumbo has served in his present capacity since 1946. About 75 doctors have taken surgery residency training under his guidance.

Dr. Walter D. Abbott, of Des Moines, took office Saturday, April 9, as president of the American Association of Railway Surgeons. Dr. Abbott, who attended the association's convention in Chicago early in April, has served as president-elect the past year.

Dr. Gershom Thompson, head of the Department of Urology at the Mayo Clinic, addressed the state meeting of the Iowa Urological Society at the Hotel Tallcorn, in Marshalltown, on Saturday, April 9. About 40 members attended the meeting, and **Dr. R. J. MacNamara**, of Dubuque, president of the organization, presided.

At the semi-annual meeting of the Iowa-Midwest Neurosurgical Society on Saturday, April 9, at the Hotel Chieftain, in Council Bluffs, the members discussed new technics in the treatment of neurological diseases. The session closed with a dinner at the home of **Dr. Maurice P. Margules** on Saturday evening. **Dr. Carroll Brown,** of Sioux City is president of the organization.

Dr. Ernest L. Wynder, of the Sloan-Kettering Institute of Cancer Research, came to Des Moines March 16 to address the Polk County Medical Society. He was co-author of the scientific paper that touched off the current intense interest in the relationship between tobacco and cancer. Among other things, he said that a person with high blood pressure has a 50 per cent greater chance of premature death than does a "normal" person, but that a person who smokes two packs



of cigarettes daily has 6,000 times more risk of developing lung cancer than does a non-smoker.

Dr. Charles W. Powell, a member of the Cherokee Mental Health Institute staff, passed the final examination given by the American Board of Psychiatry and Neurology at San Francisco on March 14. He thus becomes the first graduate of the psychiatric training program at the Cherokee Institute to receive certification by the American Board of Psychiatry and Neurology. The program was fully accredited by the AMA and the American Psychiatric Association in July, 1958.

The new North Hill Medical Building in Burlington was ready for occupancy the latter part of March. The building provides office space for seven physicians. Those immediately occupying offices are **Dr. J. H. Murray,** a pediatrician and general practitioner; **Dr. W. McCullough Crawford,** a psychiatrist; **Dr. H. N. McMurray,** a general practitioner; **Dr. Robert L. Todd,** an internist; **Dr. John F. Sulzbach,** a radiologist, and **Dr. Frank Meyner,** a pathologist. **Dr. W. C. Zabloudil** will join Dr. McMurray sometime after August 1.

Mr. Robert Flack, of Burlington, who has been Des Moines county welfare director for the last 20 years, has been discharged by the State Board of Social Welfare effective April 23. The board blames Flack in that Des Moines County is the only one in the state not participating in the Vendor Payment plan for welfare recipients.

The Dubuque chapter of the American Association of Medical Assistants was organized Wednesday, March 23. The group also has chapters in Waterloo, Fort Dodge, Des Moines, Burlington, Mason City, Sioux City, Cedar Rapids, Iowa City, Oskaloosa, Clinton, Davenport, Ottumwa and Newton-Grinnell.

Dr. Dennis G. Emanuel, of Ottumwa, sustained a severe knee injury, March 10, while removing an accumulation of ice and snow from a window awning. The ladder from which he was working tilted and caused him to fall.

A dinner honoring **Dr. A. W. Burgess,** veteran Iowa Falls physician who retired from practice on March 1, was held at the Ellsworth Hospital, Iowa Falls, on Monday, March 7. Doctors who attended the event were **Dr. F. N. Cole, Dr. E. J. Steenrod, Dr. R. J. Johnson, Dr. L. F. Parker, Dr. J. Law-**

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Deep sea oyster shell (Calcium)	600 mg.	Folic Acid	0.25 mg.
Vitamin C	50 mg.	Niacinamide	10 mg.
Vitamin A	4000 USP Units	Vitamin K (Menadione)	0.25 mg.
Vitamin D	400 USP Units	Rutin	10 mg.
Vitamin B-1	2 mg.	Sodium Molybdate	3 mg.
Vitamin B-2	2 mg.	Fluorine (Calcium Fluoride)	0.25 mg.
Vitamin B-6	0.8 mg.	Iodine (Potassium Iodide)	0.15 mg.

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rence Smith, Dr. R. W. Dunlay, Dr. T. C. Graham, and Dr. John Sear, of Alden. Hospital officials attending included Mr. Harold I. Shoemaker, hospital board chairman, Mrs. Mary Jo McGilvray, Mrs. Vivian Jensen, and Leslie Nash.

Dr. George N. Bedell, of the Department of Internal Medicine at SUI, will present a paper at the National Tuberculosis Association meeting May 15-19, in Los Angeles. His topic is "Pulmonary Diffusing Capacity in Resting Subjects With Normal and Increased Pulmonary Blood Flow."

Dr. C. M. Kos, of the Department of Otolaryngology at SUI, will present a paper entitled "Otosclerosis—Management in Pilots" at the Thirty-First Annual Meeting of the Aerospace Medical Association, Wednesday morning, May 11, at Miami Beach, Florida.

The central office of the Iowa Mental Health Authority has moved from the State Office Building in Des Moines to 30 Byington Road, Iowa City. The move became effective March 29, 1960. **Dr. Paul Huston,** head of the State Psychopathic Hospital, is the director of the Authority.

Dr. H. J. Richter, of Albia, has been notified that he will receive a license for medical practice from the state of California. Dr. Richter took the examination given in Los Angeles by the California Board of Medical Examiners on March 5 while vacationing there. He does not plan to leave Albia where he has practiced for about 25 years, and took the examination only as a challenge.

Dr. D. K. Benge, of Hampton, has been appointed a member of the Franklin County Selective Service Board. Dr. Benge, a member of the Hampton Clinic, is also Franklin County coroner.

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Roentgenologist.....**Robert Cooley,** Galveston, Texas
Anesthesiologist..**Kenneth K. Keown,** Columbia, Mo.
Surgeon.....**John K. Derrick,** Galveston, Texas

*This symposium will be held Wednesday, June 15, at 10:30 A.M. in the Fontainebleau Hotel.

Advance hotel and meeting registration forms appear in the first issue of JAMA each month.

DR. BEAN'S SENATE TESTIMONY

Dr. William B. Bean, head of the Department of Internal Medicine at S.U.I., appeared on April 12 before the Kefauver subcommittee of the U. S. Senate which is investigating the pharmaceutical manufacturing industry. The following are some excerpts of his testimony that were published in the DES MOINES REGISTER on April 20.

"The research conributions of individual members of the pharmaceutical industry have been enormous. Many drug manufacturing concerns have developed their own extensive laboratories. A distinguished investigator may be given completely free rein.

"Naturally, there is usually some pressure to work on problems of potential financial interest to the company. At the same time, much sound basic research is done and often with no ulterior motive.

NEED FOR COOPERATIVELY-ESTABLISHED SAFEGUARDS

"Physicians and apothecaries have a long and tangled story, highlighted by effective collaboration as well as violent antagonisms. The situation today needs attention, lest, in the free-wheeling competition of the marketplace, policies and practices be determined casually and without exercise of responsibility.

"This must be done not only by government agencies but by physicians and leaders of the pharmaceutical industry, individually and collectively.

"I am not concerned with the many fine pharmaceutical companies which exercise scrupulous caution in releasing new drugs. The problem is with companies whose sole concern is business. Their richest earnings occur when a new variety or variation of a drug is marketed before competing drugs can be discovered, improvised, named and released. This bonanza may last only a few months. Unless there are large earnings, the quick kill with the quick pill, the investment does not pay off.

"Commercial secrets must be kept dark, lest a competitor get the jump. Under this system it is impracticable to do tests extending over a long period of months or years to establish the range of usefulness and the potential dangers from toxicity. Such tests usually have to be done in hospitals and often in medical schools, where secrecy cannot be tolerated. Yet sometimes, because of this business aspect, a drug may be marketed after a minimum of clinical trial.

BUSINESSMEN HAVE SUPPLANTED PHARMACISTS AND PHYSICIANS

"Many fine pharmaceutical manufacturers got their start from the foresight and enterprise of a pharmacist or a physician. There was a sense of obligation to the public as well as pride in the

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General Practice Review, Two Weeks, July 11

Surgical Technic, Two Weeks, June 6

Advanced Electrocardiography, One Week, June 20

Surgery of Colon and Rectum, One Week, June 20

General Surgery, One Week, May 23

Gall Bladder Surgery, Three Days, June 20

Surgery of Hernia, Three Days, June 23

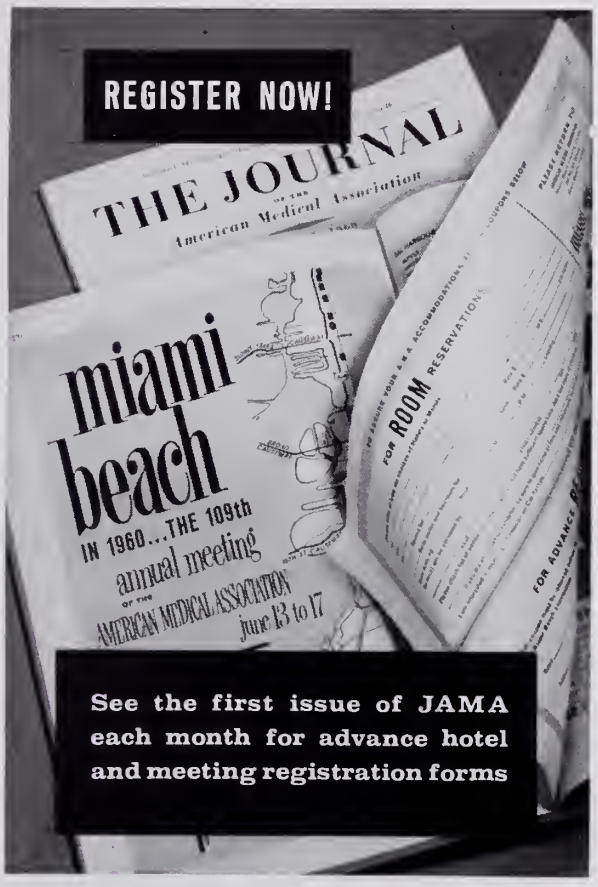
Board of Surgery Review, Part II, Two Weeks, August 8

Gynecology, Office and Operative, Two Weeks, June 20

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HOW TO USE ALPEN Depending on the severity of the infection, 125 mg. (200,000 units) or 250 mg. (400,000 units) three times daily may be used. In more severe or stubborn infections, a dosage of 500 mg. (800,000 units) t.i.d. may be employed. In beta hemolytic streptococcal infections, treatment should be continued for at least ten days.

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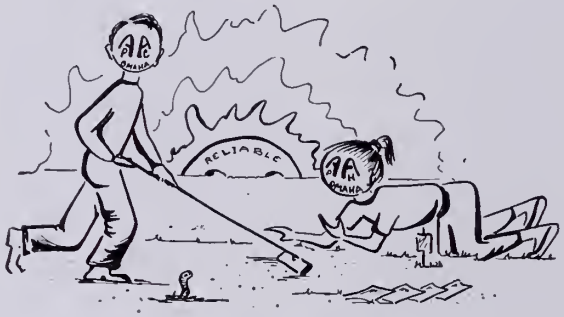
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"But two changes have occurred. Some large chemical manufacturers have entered the drug field or bought out established businesses. The founders—the pharmacist or physician—have become remote with the passage of time and industrial expansion.

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"What are the ways of promoting the sales of drugs? They are visits by detail men, mailing of brochures and samples, advertising in medical journals and 'throw away' journals which are free, and exhibits at medical meetings. None of these is bad in and of itself, but certain abuses may occur.

"Salesmen are interested in sales. If salvation can be gained, too, so much the better. Special products are praised often with a memorized monologue delivered with samples and folders.

DOCTORS ARE MISLED

"The newer drugs get special treatment. The physician, if he is uncertain of what his fellow physicians may be doing, does not want to be left at the post in any new therapeutic race either. So, with the reassurances he gets, the new therapy is launched. The results are variable but not all according to the spiel.

"A further form of beguilement is the employment of undergraduate medical students as apprentice detail men to dispense samples and to instruct not only colleagues but also teachers in the latest therapeutic recommendations of his company. Those who would use such methods to bring their products to the attention of students, interns, residents and physicians in hospitals have few scruples in sales promotion.

"Advertising by mail must be effective, or it would not be so prevalent. The sample for the physician's personal use or for some handy patient works on the principle that a pill in the hand will be put into somebody's mouth. This may appeal to the lazy or hurried and harried physician. But the drug sample is a poor substitute for thought in the practice of medicine.

"The advertising by brochure may be the weekly, monthly or quarterly house organ variety, richly illustrated, sometimes with excellent scientific or quasi-scientific articles.

"The extent to which this form of advertising has grown can be appreciated only by those who have observed the crowded mail rooms in hospitals or have taken the trouble to count and weigh the documents which daily descend upon us. If the doctor tried to read the year's crop of mailings attentively, he could do little other reading.

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mins. More compounds which act as vitamins in experimental animals have been discovered then diseases caused by a specific vitamin deficiency. This has led to the incorporation of these substances in the ubiquitous vitamin tablet.

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"Some of the dangers that we run into are those in which the physician is not a party at all. This is when the patient goes directly to the drug store and buys what he has heard about and seen on television. After swallowing the stuff, he awaits a high-octane feeling which never comes to quiet the knocking motors of his body, mind and spirit.

"Assailed on all sides, we soothe with sedatives and cancel out the effects with a stimulant and then need more pills to fight off the side effects of our remedies, and then perhaps still more to remedy the remedies of our remedies.

"In our do-it-yourself culture, our self-confidence may create or aggravate diseases by applying self-diagnosis and self-treatment unmindful of the unhappily prevalent sequel, self-sacrifice.

MEDICAL SOCIETIES AVOID OFFENDING THE ADVERTISERS

"Then, there's the question of the teaching value of medical meetings, which range from small county or town medical societies to such great conventions as the meeting of the AMA or international congresses attended by thousands.

"Society officers and those conducting meetings urge everyone to register at each exhibit and remind the audience that the society is beholden to the exhibitors for money to hold the meeting. The emphasis on strictly professional and scientific activities dwindles in comparison with the commercial aspects.

"Thus the medical meeting is expanding its functions, and risks becoming a partially tax-deductible holiday for the wife and family, an opportunity for the collection of bushels of samples and reams of brochures, as well as for all the entertainment and sight-seeing trips.

"Censorship has arisen in some medical societies which avoid scheduling papers by speakers who might be critical of the exhibitor's products. Some editors have refused to publish articles criticizing particular drugs and methods of therapy, lest advertising suffer.

"The employment of a veto power by societies which find themselves so dependent upon support

(Continued on page lxv)

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of this kind indicates a serious decline in medical responsibility, where the business management of a journal has usurped the physician's role as censor.

"At certain meetings, various pharmaceutical houses maintain convenient rooms for the relaxation of their friends and clients. Cocktail parties are the order of the day. Lavish dinners may be held. These seem to be free. Instead, they are supported by increasing the cost which our patients pay for drugs.

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DEATHS

Dr. Charles Tate Bigelow, 82, Clinton eye, ear, nose and throat specialist for 40 years and a medical practitioner for 53 years, died Wednesday, March 9, in St. Petersburg, Florida.

Dr. Pierce E. Newport, 64, a retired Clarinda physician, died at his home on March 12.

Dr. Thomas Ernest Gutch, 85, of Albia, died at his home on March 18. Dr. Gutch, a spinal surgeon, had been a semi-invalid since an auto accident in 1949. He was a Life Member of the Iowa State Medical Society.

Dr. Joseph Elmer Ridenour, 86, a Life Member of the Iowa State Medical Society, died on March 11. He practiced at Jesup for five years prior to 1901, and thereafter in Waterloo.

Dr. John Raymond Wood, 72, of Wadena, died Friday, March 11, at the Veterans Domiciliary Center at Iowa City. He had retired in 1957 because of poor health.

Dr. Ralph H. Moe, 45, of Griswold, died April 1 following surgery at a Council Bluffs hospital.

Dr. James B. Miner, 55, of Charles City, died there of a heart condition April 7 at Cedar Valley Hospital.

(Continued on page lxvii)

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Dr. Martin T. Spellman, former Cedar Rapids physician, died Saturday, April 2, at Oshkosh, Wisconsin.

Dr. K. M. Gilbert, 78, a one-time Curlew, Iowa, doctor, died at Chandler, Arizona, early in March. He had resided in Chandler since 1911.

Dr. Ruben Nomland, 61, of Iowa City, died of a heart ailment April 13 at University Hospitals. He had been the head of the Department of Dermatology and Syphilology at SUI since 1936, and was one of the most widely known dermatologists in the nation.

DIRECT VISION THROUGH FLEXIBLE CORDS

On Tuesday, April 19, the WALL STREET JOURNAL described fiberglass ropes capable of simultaneously conveying light around obstructions and into dark areas heretofore inaccessible to direct vision, and returning an accurate image. The trick is done with mirrors—ones of an unusually complex type.

The American Optical Company, of Southbridge, Massachusetts, has set up a department to market the devices, and Bausch & Lomb Optical Co. expects to have competitive instruments ready for sale shortly, the newspaper said.

"The glass ropes are actually bundles of hair-like glass threads so fine it takes as many as 250,000 to make a rope half an inch in diameter. Light entering one end of a bundle of glass fiber flows to the other end. If the fibers are arranged in exactly the same way at both ends, the bundle transmits a clear image made up of thousands of tiny dots. These image-transmitting bundles can see in dark corners; they send light one way to illuminate the area and carry images back in the opposite direction.

"Each of the fibers carries its own beam of light. The beam stays within the same fiber, being reflected from wall to wall as it passes through the fiber. To prevent any light from escaping at points where the fiber is bent, the exterior wall of the fiber is coated with a special type of glass."

Heretofore, according to the newspaper account, the technic has been little more than a laboratory curiosity, but doctors have asked for various adaptations for examining body cavities. Bausch & Lomb recently produced a pencil-thin, 40-inch-long bundle of glass fibers for examining the walls of the duodenum in ulcer cases. It is now being tested at the Johns Hopkins medical school.

American Optical Co. developed an adaptation for use in teaching dentistry at the U. S. Navy's dental school at Bethesda, Maryland. One end of a slender, three-foot-long bundle of fibers is inserted into the patient's mouth, and the other end is coupled to a closed-circuit television camera. Thus, as the instructor works on a tooth, the operative area can be reproduced, greatly magnified, on a television screen in front of a considerable number of students.



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ILLINOIS SOCIETY'S ANNUAL MEETING

The Illinois State Medical Society will hold its 120th annual meeting at the Hotel Sherman, Chicago, May 24-27. The scientific program will consist of formal papers, panels, symposia, exhibits, motion pictures and a closed-circuit television demonstration.

The following are three of the principal papers that will be presented:

"Surgical Patterns of Atherosclerosis"—Dr. Michael E. DeBakey, of Huston

"Changing Aspects of Pediatric Surgery"—Dr. Willis J. Potts, Northwestern University

"The Treatment of the 'Untreatable' Patient" —Dr. Joseph B. Kirsner, University of Chicago

Other features of the program include:

Panel Discussion: "The Diagnosis and Management of Hepato-Biliary Diseases"—Drs. N. Frederick Hicken (moderator), Philip Thorek, Ben Lichtenstein, Walter Palmer and Abraham I. Doctorsky

Panel Discussion: "Diaphragmatic Hernia"—Drs. John T. Reynolds (moderator), Lowell D. Snorf, Raymond L. DelFava and Paul H. Hollinger

Symposium and Closed-Circuit Television Demonstration: "Minimizing the Disability Due to Stroke by Early Preventive Treatment"

In addition to the general assembly program, there will be sections on allergy, anesthesiology, cardiovascular disease, dermatology, EENT, medicine, obstetrics and gynecology, pathology, pediatrics, preventive medicine and public health, radiology, and surgery.

A non-scientific feature will be the annual Public Relations Luncheon, at which the speaker will be Judge Julius H. Miner, of the U. S. District Court at Chicago. He will report on the results of the first six months of operation of an impartial medical testimony program undertaken in cooperation with the Illinois State Medical Society.

Dr. H. Close Hesseltine, a former Iowan who is now Mary Campau Ryerson professor of obstetrics and gynecology at the University of Chicago, will be installed as president of the Society at the close of the meeting.

Further information can be had from Dr. George F. Lull, secretary, Illinois State Medical Society, 360 North Michigan Avenue, Chicago 1.

MEETING FOR STUDENTS IN DAVENPORT

The Scott County Medical Society, this week, is attempting to do something about the fact that enrollment quotas of medical schools are being no more than barely filled. On May 3, it is holding its First Annual "Student Invitation Meeting" at the Davenport Outing Club. The officials of the high schools and colleges of the community have cooperated in selecting science students to attend, and the students have been sent individual invitations. It is expected that a total of 53 students and

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faculty representatives from five schools will attend.

Dr. Robert C. Hardin, associate dean of the S.U.I. College of Medicine and a professor of internal medicine, will speak on the subject, "Career Opportunities in Medicine," and Dr. Woodrow W. Morris, associate dean for student affairs at S.U.I., will speak on "Scholarship, Personal Requirements for Admission, and Scholastic Achievement in Medicine."

The Scott County Medical Society has been instrumental in having the AMA film "I Am a Doctor" shown to between 2,500 and 3,000 high school and college students in its area. In addition, guidance handbooks were supplied to teachers, and pamphlets were distributed to 1,000 students.

MEDICAL SCHOOLS SEEK STUDENTS

A report occupying about two columns in the WALL STREET JOURNAL, on April 13, quoted several medical school administrators, including one at S.U.I., on the present and prospective seriousness of the physician shortage, and on what their respective institutions are doing to alleviate it.

Dean Lowell Coggeshall, of the University of Chicago's School of Medicine, recently arranged a seven-hour tour of the Billings Hospital facilities for 200 high school students, and at its conclusion, urged them to study medicine "even if you are short of funds." The University of Michigan is enrolling pre-med students in biological research projects as a means of sustaining their interest in eventually studying medicine. And Dean Walter L. Hard, of the University of South Dakota's two-year medical school, writes letters to high school students who have expressed an interest in medicine, inviting them to visit the campus and attempting to dispel the idea that only geniuses can pass medical courses.

The report contained some interesting statistics. It said that though the nationwide physician-population ratio has remained practically unchanged through the past 20 years at 1:760, the average American now visits a doctor twice as often as he did 20 years ago. Besides the shortage of doctors to care for the people in small towns, Dr. Ward Darley, executive director of the Association of American Medical Colleges, says he finds shortages of some types of specialists—anesthesiologists, pathologists and radiologists, among others.

The number of students who applied for admission to medical schools last fall sagged to about 1.8 times the freshman capacity, the lowest ratio in 20 years, according to preliminary figures. Moreover, the quality of medical students has declined. During the 1957-1958 academic year, 7.8 per cent of medical school freshmen withdrew on account of poor grades or for other reasons, as contrasted with 5.5 per cent in 1954-1955.

The chief aim of medical leaders at the moment,

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the JOURNAL said, is to attract greater numbers of qualified students to medicine. But they don't want to be thought too fussy. "We have an undeserved reputation for demanding high grades," comments Dr. Coggeshall. "We even take a student who has some C's and D's in his early undergraduate work, if he moved them up to, say, B in his later studies. There's plenty of room in medicine for the good average student."

The State University of Iowa's College of Medicine, this spring, will initiate a program of visiting colleges and will publish a booklet for high school students. The prime purpose of its activities is "to clear up widespread rumors that to study medicine you have to be the son of a doctor or similar professional person, and that if your parents aren't college graduates you don't stand a chance," says Dr. W. W. Morris, associate dean of the College of Medicine.

The AMA and the Association of American Medical Colleges are now getting out a 24-page booklet, MEDICINE AS A CAREER, the first such circular ever published by the two organizations.

An AMA committee is preparing a plan to present to the House of Delegates at Miami Beach in June which would create 50 medical-school scholarships to provide each recipient about $1,000 per year for four years.

Columbia University's College of Physicians and Surgeons is planning to increase scholarship assistance to medical students. "Many of the outstanding men and women are already receiving financial help in liberal arts colleges and can't go into medicine unless they have assistance there," says the associate dean, Dr. Aura Severinghause.

VALUE OF FLUORIDE TOOTHPASTES NOT PROVED

At present, one can only speculate or theorize regarding the value of fluoride dentifrices in controlling decay, Francis A. Arnold, Jr., D.D.S., of the National Institute of Dental Research, Bethesda, Maryland, announced in the April issue of AMA ARCHIVES OF INDUSTRIAL HEALTH. "The results of clinical trials made so far are as controversial as are those obtained by the use of other dentifrices," he said.

He made these other points:

1. The use of fluoride compounds that are applied by dentists are of value in preventing decay, particularly in areas where fluoridation of public water supplies is not feasible.

2. The use of fluoride supplements to the daily diet present problems and requires daily supervision. Such supplements are most effective during formation of teeth.

3. More than 1,500 communities are now fluoridating their water supplies. This method undoubtedly has as much scientific support for its safety and effectiveness as any other public health procedure.

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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Second-class postage paid at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

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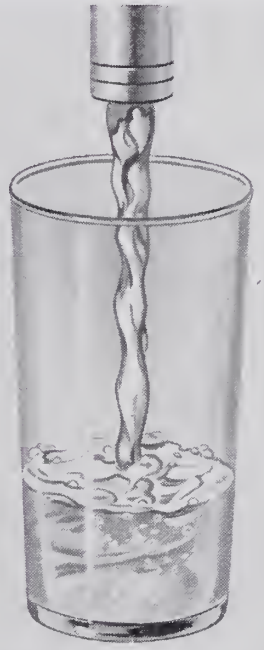
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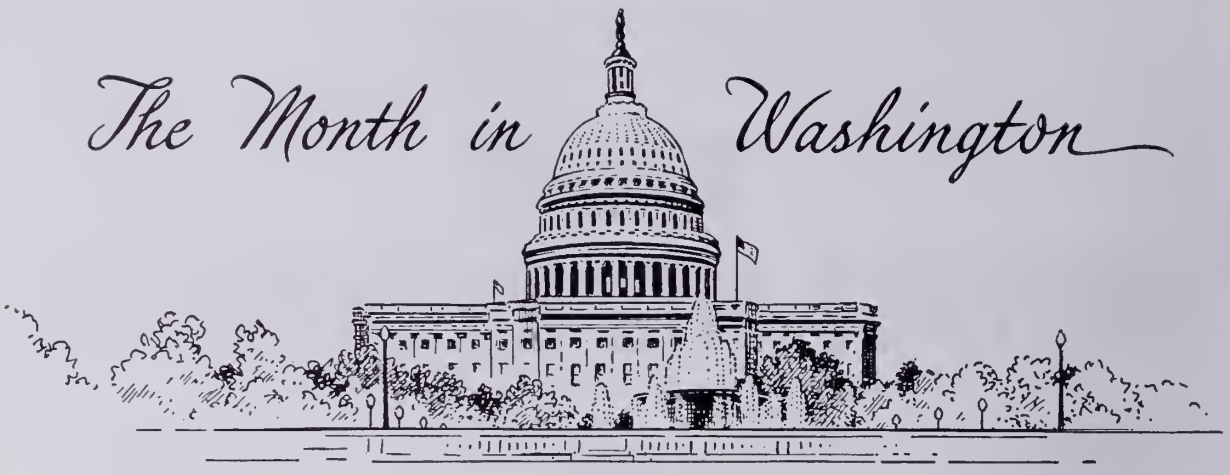
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The Month in Washington



Washington, D. C.—Politics now overshadow all other factors in affecting the issue of health care for the aged.

It appears certain to be a major issue in this year's campaigning for the White House and Congress, regardless of what Congress does in the field before adjourning this summer.

Both the Democrats and the Republicans are supporting costly, sweeping plans which differ in basic approach. The major Democratic plans call for use of the Social Security System. The Republican proposals would have the Federal government and the states put up hundreds of millions of dollars to help the aged buy health insurance on a voluntary basis.

The medical profession and allied groups oppose these political solutions because, among many other important reasons, they actually would not meet the problems of many aged who need help in financing the cost of illness.

Meanwhile, a key Democrat—Rep. Burr Harrison of Virginia—warned Congress against acting on such legislation in this year of a national election. He predicted that if any such legislation should be approved this year, it "would be certain to be a monstrosity."

Noting that various solutions had been proposed, Harrison said:

"The only features which these proposals have in common are that they are all tremendously expensive; they all propose revolutionary change; and they are all complicated, uncertainly-based and little-understood by the prospective beneficiaries."

Harrison, who is a member of the House Ways and Means Committee which handles such legislation, urged that Congress defer action until next year. He recommended that, in the meantime, the Ways and Means Committee "conduct an exhaustive study of the various proposals."

In early May, the Eisenhower Administration unveiled a Federal-state, $1.2 billion-a-year plan to help the aged with limited incomes buy broad medical and hospital insurance coverage. Under the plan, an aged person—if able financially—would bear part of the cost of both the insurance and of the medical care and hospitalization.

Arthur S. Flemming, Secretary of Health, Education and Welfare, and Vice-President Richard M. Nixon stressed that participation by the aged in the Administration program would be on a voluntary basis.

The Administration's plan immediately ran into widespread opposition. Dr. Louis M. Orr, Orlando, Fla., president of the American Medical Association, said it was based "on the false premise that almost all persons over 65 need health care and cannot afford it."

"This is not a fact," Dr. Orr said. "The truth is that a majority of our older people are capable of continuing a happy, healthy, and, in many cases, productive life. Of the more than 15 million persons in the nation over 65 years of age, only 15 per cent are on old-age assistance."

Dr. Orr said neither the Administration's proposal nor the Forand-type Social Security approach is tailored to meet the problems of the undetermined number of older persons who, "although able to finance other costs, find is difficult to withstand the additional burden of the cost of illness."

Dr. Orr advocated the AMA's positive eight-point program for the health care of the aged as a "sensible, economical" plan that would preserve freedom as well as promote security. If both these objectives are to be realized, Dr. Orr said, health care programs for the aged "must necessarily be limited to support for the needy aged and leave to voluntary, competitive, private enterprise, those activities needed to improve the health care of the rest."

In brief, the AMA program comprises: 1) improved preventive medical care for the aged; 2) a state-administered program of Federal grants-in-aid to states for liberalization of existing old-age assistance programs so that the near-needy

could be given health care without having to meet the present rigid requirements for indigency; 3) better nursing home facilities for the long-term care of aged persons, especially those over age 75; 4) rapid development of health insurance and prepayment policies to provide long-term nursing home care;

5) Expansion of home nursing care services; 6) elimination of compulsory retirement and a basic change in the attitude that a person who reaches 65 has suddenly become non-productive and senescent; 7) health education to instill a "will to live" in older persons and to make them aware of the need for continuing healthful nutrition; and 8) anti-inflationary curbs to maintain the purchasing power of fixed pension and annuity benefits.

A Republican lawmaker, Sen. Barry Goldwater of Arizona, denounced the Administration's plan as "socialized medicine" and a "dime store new deal." The outspoken conservative predicted its ultimate cost would be "staggering." He said the Administration could have done better by proposing "full deductions for taxes for any amount spent for medical care of anyone" and for full costs of health plans by either an individual or corporation.

In endorsing the Administration's plan, Vice-President Nixon charged the Forand-type proposals backed widely by Democrats would "open the door for socialized medicine." He said:

"The Forand bill and similar plans would set up a great state program which inevitably would head in the direction of herding the ill and elderly into institutions whether they desired this or not. Such a state program would threaten the high standards of American medicine."

Sen. Pat McNamara (D., Mich.), chairman of the Senate Subcommittee on Problems of the Aged, headed a group of 16 Senate Democrats who sponsored legislation that would provide hospitalization and medical care for virtually all the nation's older persons.

The co-sponsors included three avowed candidates for the Democratic nomination for president —Sens. Hubert H. Humphrey (Minn.), John F. Kennedy (Mass.) and Stuart Symington (Mo.).

Cost of the McNamara legislation was estimated at $1,578,000,000 a year. This would be financed by a one quarter per cent increase in the Social Security tax and 370 million dollars from general tax money.

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HOSPITAL COSTS IN INDIANA

In its monthly statistical bulletin PROGRESS IN HEALTH SERVICES (May issue), the Health Information Foundation has published an analysis of the 1956 records of one Blue Cross Plan—the Blue Cross Hospital Service of Indiana—and, specifically, the 843,000 subscribers enrolled under one prepayment program. Here are some of the major findings.

One-fifth of all hospital admissions were for obstetrical care. But since the average stay per obstetrical case was fairly short (4.6 days), the total hospital bill per admission in this category was $119—below average.

Of all the major diagnostic categories analyzed, cancer was responsible for the longest average hospital stay—15.5 days. And since the average charge per day was high, cancer patients also averaged the highest bills per admission—$387.

Diseases of the digestive system such as ulcers, hernia and appendicitis accounted for a larger share of total hospital days than any other category—145.2 per 1,000 insured individuals a year, or one-sixth of the total days for all admissions.

There were 115.5 hospital admissions per 1,000 in the covered population for all causes, and the average length of stay per admission was 7.3 days. Total hospital use, the product of the two factors, amounted to 838.8 days per 1,000 persons annually.

Hospital bills submitted to Blue Cross averaged $22.91 per day for room rate and other charges, or $166 for each hospital stay. These bills, when spread over the entire insured population (whether or not they were hospitalized) came to $19.22 per person per year, which corresponds closely to the average annual expenditure on hospital services of $22 in 1957-1958 as reported by the Foundation in February of this year.

According to George Bugbee, president of the Foundation, the data "give little support to the criticism that great numbers of patients are unnecessarily admitted to general hospitals or could be treated less expensively elsewhere."

He pointed out that almost two-thirds of the cost of hospital care in the study group went for surgery, including obstetrical care—services in which hospitalization is clearly indicated. "It is no accident," he said, "that these high-cost services are ones through which recent reductions in mortality have been especially striking. The present cost, while substantial, is part of the price of progress."

Although the study was limited to Indiana, it has nationwide implications, particularly since hospital costs in Indiana appear to be close to national averages.

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THERAPY FOR ALLERGIES WITHOUT SKIN TEST

A method of treating allergic disorders without the necessity of first making skin tests to identify the offending substance was described to members of the Kentucky Academy of General Practice in Louisville on May 13. Dr. Edward A. Troncelliti, an attending pediatrician at Bryn Mawr Hospital, Bryn Mawr, Pennsylvania, recounted his experiences in 105 patients, all treated more than six months with a liquid extract (Anergex) from a plant called Toxicodendron quercifolia. The injections, given daily for from five to eight days, proved curative in 57 cases, he said, and caused improvement in 26 more, for a success rate of 79 per cent.

Dr. Troncelliti pointed out that treatment of allergies in children is difficult at best because babies and youngsters display rapid changes in their sensitivities. The search for a single, universal means of treating such varied conditions as sneezing, eczema, asthma and inability to tolerate cow's milk has been going on for many years. The introduction of foreign protein was the basis of many attempts, but the results were poor.

He said he had obtained the best results in eczema (atopic dermatitis). Of a group of 46 patients ranging in age from a few weeks to 12 years, 29 were cured and another 13 showed improvement after treatment. Four failed to respond to therapy.

Poorest results were found in 11 patients whose allergies were due to bacteria or ill-defined viruses. Only one of them was helped.

Dr. Troncelliti said he had used Anergex in other types of allergy as well. Of a group of 41 patients with "upper respiratory" problems characterized by asthma, rhinitis, cough and conjunctivitis, 22 were cured, 12 improved and the remainder unbenefited. Of four babies allergic to cow's milk and for whom the customary treatment would be a shift to goat's milk or a soybean preparation were given the injections. All were cured; allergy to cow's milk has not returned. Three youngsters suffering urticaria or hives were also treated. Two of them were cured, and the third failed to benefit.

Dr. Troncelliti warned his audience that the injections are painful, and he admitted that the drug's mechanism of action remains unknown, but said that in none of his 105 patients was there any untoward side-effect. Improvement, when it occurred, was rapid, taking place in about 72 hours.

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1. Lippmann, O.: Arch. Ophth. 57:339, March 1957
2. Gordon, D.M.: Am. J. Ophth. 46:740, November 1958.

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Personals



Dr. R. L. Baltzell, of Anthon, moved early in April from temporary quarters in his residence to the New Sioux Valley Medical Center.

Plans for the dedication of the building are being made, and it is expected that **Governor Herschel Loveless** will be invited to speak on that occasion. The Sears-Roebuck Foundation assisted with the planning and fund raising for the structure.

Dr. Baltzell is a 1958 graduate of the medical school of the University of Pennsylvania, and he interned at Denver General Hospital. He will succeed **Dr. Francis P. Cauley,** who has served the community since 1911 and is now retiring.

Acceptance of more $200,000 in gifts and grants to the SUI College of Medicine from individual citizens, federal agencies and other organizations was approved recently by the finance committee of the State Board of Regents.

Some of the larger grants for research, teaching and material improvements in the College of Medicine include $9,200 from the United States Public Health Service for research on the metabolism of tryplophan and $17,365 from the same organization for research on the availability of the amino acids for growth. **Dr. Titus Evans,** professor and director of the Radiation Research Laboratory received $20,000 from the Atomic Energy Commission for purchase of equipment for use in teaching life sciences, and $9,000 from the American Cancer Society, Inc., for cancer studies. **Drs. Robert L. Morris, J. R. Porter, Raymond F. Sheets, Henry E. Hamilton** and **W. J. Whalen** were recipients of separate grants from the USPHS also. Dr. Morris received $13,014 to determine conditions under which home water softeners reduce fluorine concentration in water; Dr. Porter received $39,000 for a training program in microbiology; Drs. Sheets and Hamilton will use their grant of $20,125 for a study of those aspects of red blood cell metabolism which have to do with anemia, and Dr. Whalen will use his grant of $6,500 for a comparative study of heart function.

The Woodbury County Medical Society met May 19, at 6:30 p.m. at the Jackson Hotel, Sioux City.

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A film was shown entitled "What General Practitioners Should Know About Glaucoma." The film was followed by comments by **Dr. J. E. Dvorak** and a panel discussion in which the participants were **Drs. W. C. Boden, J. E. Reeder, W. P. Davey, V. R. Heimann** and **M. J. Ryan,** all of Sioux City.

Dr. Francis Tamisiea, of Missouri Valley, suffered a hand laceration and possible back injuries in a two-car accident at Hamlin, Sunday, April 24. His car was damaged to the extent of $500.

The premise that tuberculosis can be eradicated by treatment sounds simple but is completly unfeasible at present, according to **Dr. George W. Smiley,** director of Sunnyslope Sanatorium in Ottumwa. Dr. Smiley addressed members and guests of the Van Buren County Tuberculosis and Health Association, Thursday evening, April 21, at Keosauqua. Lack of public interest, shortage of trained personnel and facilities and shocking indifference on the part of many tuberculosis victims or those who have had direct and prolonged contact with victims are all responsible for the impossibility of completely eliminating TB, Dr. Smiley said.

He proposed a southeastern Iowa tuberculosis control program, unique in the state and offered his services free as director of the plan. Under the proposed nine-county plan, extensive skin testing and x-raying of positive reactors will be carried out, with complete follow-up programs including further x-ray checking of relatives and contacts of known cases of tuberculosis, and keeping extensive records.

Dr. J. T. Worrell, of Keosauqua, is medical director and the newly-elected president of the Van Buren County TB and Health Association.

The new one story brick Osage Medical Clinic opened Monday, April 25. The building provides office space for five doctors plus a laboratory, pharmacy, and emergency room. The clinic contains 60-65 rooms with a roughed-in area in the basement which will eventually provide space for five additional rooms. Doctors who occupy the clinic are **Dr. J. O. Eiel, Dr. R. B. Isham, Dr. W. A. Spencer, Dr. J. W. Crossley,** and **Dr. Frank Kloster.**

Persons attending a public meeting at Farmington on April 4 voted 210 to 5 to follow advice of the Sears Roebuck Foundation in providing facilities designed to attract a doctor for the town. Speakers included **Mr. Norman H. Davis,** director of the Foundation's medical program, and **Dr. L. C.**

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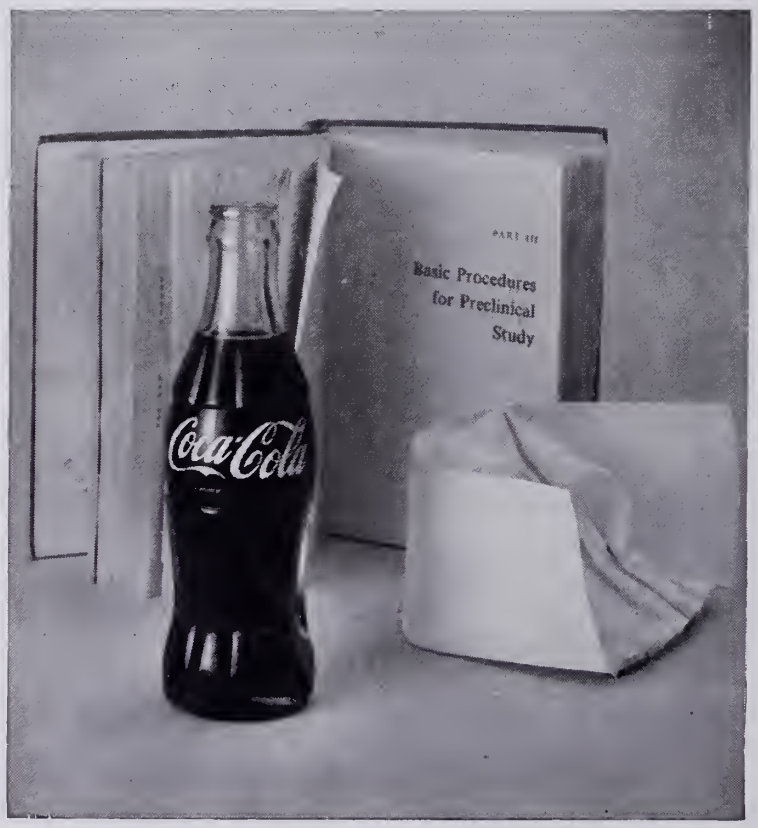
Pumphrey, of Keokuk, vice-president of the Iowa State Medical Society. The Foundation already had made a survey of the community's potential for supporting a doctor, and it will provide plans for construction of a medical center and guide the community in a fund-raising campaign.

Citizens of Preston, Iowa, are initiating a fund-raising program to build a medical center and thus attract a doctor to their town. Pledges totaling $4,000 were taken at the first community meeting held late in April.

Joan Wallace, 15, a sophomore at Roosevelt High School, Des Moines, and **Robert J. Stephenson, Jr.**, 16, a junior at Ames Public High School, won $400 college scholarships, the top awards in the 1960 Hawkeye Science Fair held at Veterans Memorial Auditorium in Des Moines on April 9. Miss Wallace, who is a granddaughter of former U. S. Vice-President Henry Wallace, had the top exhibit in the biological sciences division. Her exhibit, entitled "Germinal Disk Prediction of Hatchability," proved that from looking at egg germ disks one can tell whether they will hatch or not. Mr. Stephenson, the son of a science teacher at Central Junior High School, Ames, had the top exhibit in the physical sciences division, a display entitled "Dielectric Analysis." With the apparatus he built, he is able to demonstrate, determine and analyze the structure of molecules in different chemical substances. There were 210 exhibits by young Iowa scientists from 50 Iowa cities and towns at the Science Fair, and about 9,000 persons viewed the exhibits during the two days on which it was held.

Two doctors and two lawyers discussed the technics that their respective professions might use in helping to prevent divorce, at the annual joint meeting of the Polk County Medical Society and Bar Association in Des Moines on April 20. The moderator, **Mr. Philip Cless**, said he had undertaken to investigate whether the new Iowa law requiring a "cooling off" period prior to the issuance of a divorce decree was having the desired effect of reducing the number of divorces. He said he was informed by **Mr. Loren Chancellor**, of the Division of Vital Statistics in the State Health Department, that during the first full year that the new law was in force, an encouraging decrease in the divorce rate occurred. However, Mr. Chancellor had told him that the figures for last year, though as yet incomplete, seem to show a marked trend upward once more.

Dr. Herbert C. Merillat, a psychiatrist, declared that whether a marriage endures or cracks up de-



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pends mainly on the kinds of families the husband and wife came from. If they came from harmonious homes, divorce is relatively unlikely for them. **Dr. Parker K. Hughes,** a gynecologist, pointed out, among other things, that "having a child is never a solution for a discordant marriage."

Mr. Wendell B. Gibson, the author of a book entitled FAMILY LAW and published by the American Law Institute, made the point that today there is a strong public policy in favor of easy divorce. **District Judge Don L. Tidrick,** whose court gets all of the Des Moines domestic relations cases, said that perhaps the best way for lawyers to help keep couples together is for them to point out to dissatisfied wives and mothers some of the disagreeable financial facts connected with divorce. When a judge must decide how much alimony and child-support payments to levy against a man, Judge Tidrick said, he must be guided not by how much money the mother and children need, but by how little the divorced husband and father is likely to be satisfied with. If the man isn't content with the settlement, he won't work, and his ex-wife and children will get nothing.

Judge Tidrick pointed out that a lawyer must be especially self-sacrificing if he urges a client to try once more to make a success of marriage. A client who seeks out a lawyer in order to obtain a divorce won't pay the lawyer unless he gets a divorce. Thus, Judge Tidrick said, attorneys are unlikely to ask embarrassing questions. "If I walked into a doctor's office and asked him to cut off my hand, he would probably ask me why," the judge continued. "He might cut it off, but he would ask why first. But if I walked into a lawyer's office and asked for a divorce, he would ask me my name and would want to know how long I had lived in Polk County."

Early in April a building permit was issued to **Dr. Wallace Ash,** of DeWitt, for construction of a new clinic to be located near the DeWitt hospital.

The Linn County supervisors on April 29, appointed **Dr. Percy Harris** to serve as coroner the remainder of this year. He succeeds **Dr. Richard Navratil** who resigned for business reasons.

Dr. Jack Irvine, an interne at Broadlawns General Hospital in Des Moines, will join the general practice partnership of **Drs. John E. Sinning, Jack S. Crandall,** and **William R. Wessels** at Marshalltown on July 15. Dr. Irvine is a 1959 graduate of the medical school at the University of Kansas.

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Dr. Maurice Wicklund, of Waterloo, has been elected president of the Black Hawk County Tuberculosis and Health Association, succeeding **Mr. Finn B. Erikson.**

Dr. George W. Smiley, medical director and superintendent of Sunnyslope, Wapello County's tuberculosis sanatorium, was presented the Walter L. Bierring Award Thursday evening, April 7, at the annual meeting of the Iowa TB and Health Association. The award was given Dr. Smiley for outstanding services in tuberculosis control in Iowa. He is a fellow in the College of Chest Physicians, is representative councilor in Iowa for the American Trudeau Society, is first vice-president of the Mississippi Valley Conference (TB Group) and is a member of the Conference's governing council.

Dr. E. L. Cox, of Moulton, underwent surgery for the removal of his left foot at a Wabash Railroad hospital in Moberly, Missouri, early in April. He is recovering satisfactorily.

A merit award to a junior medical student has been established at the University of Iowa in memory of the late **Dr. Jane Leinfelder,** wife of **Dr. P. J. Leinfelder,** professor of ophthalmology in the University's College of Medicine. Each year's recipient of the $50 award will be selected on the basis of outstanding scholarship. Winner of the first award will be announced at SUI's 1960 medical convocation.

Dr. Walter L. Bierring, 91, director of Iowa Health Department's Division of Gerontology, Heart and Chronic Diseases, was honored April 18 at a dinner at New York Medical College. He was one of 17 selected by the deans of America's 84 other medical colleges, as citizens who have made important contributions to medical education.

Dr. Paul B. Skelley, of Dubuque, was named secretary-treasurer of the Iowa Academy of Surgeons at the group's annual spring meeting held Tuesday, April 26, at Wakonda Country Club, in Des Moines. Other officers elected were **Dr. Merle Brown,** of Davenport, president; and **Dr. Robert Hickey,** Iowa City, vice-president. The academy voted its first honorary membership to **Dr. Frank Peterson,** of Cedar Rapids, and admitted **Drs. J. Lawrence Smith,** of Iowa Falls, and **Donald T. Stroy,** of Council Bluffs, as new members.

At the ISMS annual meeting on April 24-27 in Des Moines, **Dr. Eugene VanEpps,** head of radiology at the SUI College of Medicine, was installed as president. Officers elected or reelected included

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Dr. O. N. Glesne, of Fort Dodge, president-elect; **Dr. V. W. Petersen**, of Clinton, vice-president; **Dr. R. F. Birge**, of Des Moines, secretary; and **Dr. H. J. Smith**, of Des Moines, treasurer. **Dr. C. V. Edwards, Sr.**, of Council Bluffs, was re-elected speaker of the House of Delegates and **Dr. J. T. McMillan, III**, of Des Moines, vice-speaker. **Dr. George H. Scanlon**, of Iowa City, was elected to a one-year term and **Dr. Otis D. Wolfe**, of Marshalltown, to a three-year term on the Board of Trustees. **Dr. L. W. Swanson**, of Mason City, and **Dr. C. H. Stark**, of Cedar Rapids, were named delegates to the AMA, and **Dr. E. M. Smith**, of Eagle Grove, and **Dr. R. H. Flocks**, of Iowa City, were named alternate delegates.

District Councilors who were re-elected to office are: **Dr. Dean H. King**, Spencer, Third District; **Dr. Guy E. McFarland, Jr.**, Ames, Fifth District; **Dr. John H. Sunderbruch**, Davenport, Eighth District and **Dr. Harold J. Peggs**, Creston, Tenth District.

At the final session of the House of Delegates, **Dr. George H. Keeney**, of Mallard, was named Iowa's outstanding general practitioner of the year. He was so recognized according to his citation "not only because of his great value as a doctor of medicine, but also for his tireless efforts to bring about those things which are good in education and citizenship." Dr. Keeney will be Iowa's candidate for the 1960 national practitioner award to be presented by the AMA in December.

Life memberships in the Iowa State Medical Society were awarded at the ISMS annual meeting to 16 doctors from over the state. In order to be eligible, each of the physicians named had to have a record of half a century of practice and 30 years of membership in the State Society. The recipients were **Drs. Charles S. Hickman**, of Centerville; **Paul W. VanMetre**, of Rockwell City; **John E. Kimball**, of West Liberty; **Roy C. Gutch**, of Chariton; **T. B. Throckmorton**, of Des Moines; **Julius Weingart**, of Des Moines; **George W. Behrens**, of Davenport; **Guy E. McFarland, Sr.**, of Ames; **Charles W. Maplethorpe, Sr.**, of Toledo; **Enos D. Miller**, of Wellman; **George E. Schnug**, of Dows; **Stephen A. O'Brien**, of Mason City; **Howard O. Young**, of Marion; **Charles L. Closson**, of Walker; **Carl B. Hickenlooper**, of Winterset, and **James E. Reeder, Sr.**, of Sioux City.

Associate memberships awarded because of retirement or incapacitation of the recipients were voted to the following men: **Dr. Max A. Armstrong**, Newell; **Dr. Henry J. Heusinkveld**, Clinton; **Dr. Ernest J. Voigt**, Burlington; **Dr. Wayne A. Johnston**, Dubuque; **Dr. Ralph W. Beardsley**, Liver-



more; **Dr. Paul W. Berney,** Cedar Rapids; **Dr. Gaylord R. Andre,** Lisbon; **Dr. George H. Clark,** Oskaloosa; **Dr. Eugene H. McCaffrey,** Des Moines; and **Dr. Frank W. Fordyce,** Des Moines.

Plans for the formation of a Future Doctors Club, composed of high school students interested in becoming doctors, were announced April 16 by the Union County Medial Society. The Club is open to both boys and girls. The purpose of the Club is to create interest among high school students in medical training. Interested students can leave their names with the principal of their high school. An orientation and organization meeting is planned before the end of the present year.

Dr. Stuart T. Ramsdell has been elected chief of staff of the Clarinda Municipal Hospital, succeeding **Dr. Earl Bossingham. Dr. W. G. Kuehn** is the new vice-chief and **Dr. Adeline Comeau** is secretary-treasurer.

Dr. L. H. Jacques, president of the Iowa chapter of the American Academy of General Practice, recently denied the charge by another Iowa physician that some medical societies are "beholden" to drug manufacturers. The accusation was made by **Dr. William Bean** of the University of Iowa medical school, in recent testimony before the Senate anti-trust and monopoly subcommittee investigating drug prices. Dr. Bean had said that "Some medical societies are so beholden to some drug manufacturers that they won't listen to criticism of the firm's products." Dr. Jacques' denial of the charge was made in a telegram to **Senator Everett M. Dirksen,** a member of the subcommittee. In the telegram he disclaimed "ever having had knowledge, first hand or otherwise, of any medical society being 'subservient' to any drug manufacturers, 'free spending' or otherwise." He conceded that drug companies rent space at physicians' meetings and conventions, but said the payments are used to defray the costs of obtaining scientific speakers and directly contribute to the quality of the group's strictly professional and scientific activities.

The fourth edition of a medical book on communicable and infectious diseases by **Dr. Franklin H. Top,** of SUI, and 21 other authorities in the field was recently published by C. V. Mosby, of St. Louis. Other contributing authors from SUI are **Dr. Irving H. Borts,** professor of hygiene and preventive medicine and director of the State Hygienic Laboratory; **Dr. A. E. Braley,** professor and head of ophthalmology; and **Dr. Ian Maclean Smith,** an associate professor of internal medicine.

The first edition of the book was published in 1941, with later editions published in 1947 and 1955.



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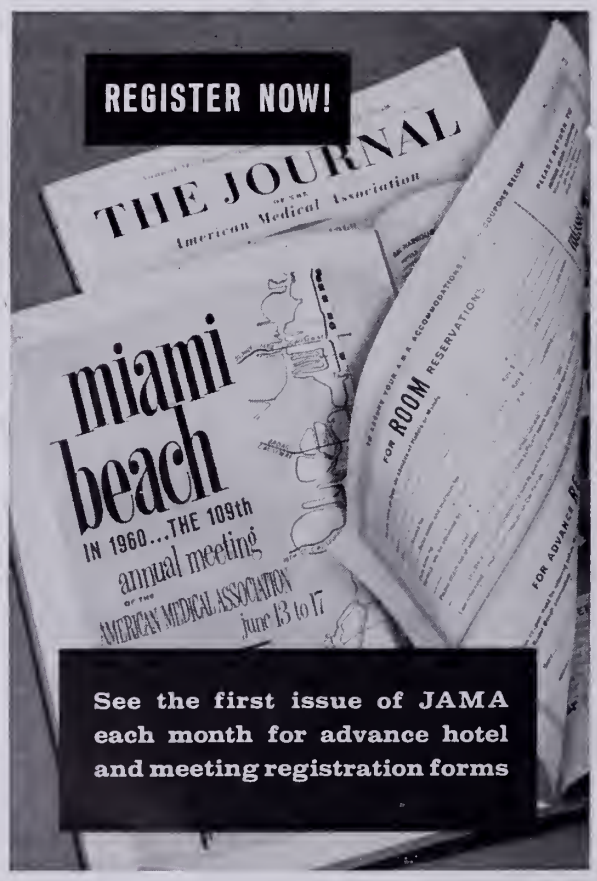
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Two members of the SUI student health service attended the annual meeting of the North Central Student Health Section at La Crosse, Wisconsin, April 22 and 23. They were **Dr. Chester I. Miller,** chief of the University's student health service and president of the North Central group, and **Dr. Robert A. Wilcox,** psychiatrist on the SUI student health staff. Dr. Wilcox presented a paper on psychiatric problems of college students.

Dr. John R. Heller, director of the National Cancer Institute at Bethesda, Maryland, was guest speaker Monday, April 25 at the SUI College of Medicine. He spoke on "Viruses and the Cancer Problem." Dr. Heller's visit to SUI was sponsored by the Iowa Division of the American Cancer Society and by the St. George Society, an organization which promotes interest among medical students in the study of cancer.

Dr. John Sulzbach, of Burlington, attended a 2-day regional meeting of the American Cancer Society held May 6-7. Dr. Sulzbach was one of six volunteers representing the Iowa division, and is service chairman of the local Cancer chapter and a member of the state board.

Dr. James F. Speers, director of the Des Moines-Polk County Health Department, was named president-elect of the Iowa Public Health Association at the organization's convention in Burlington, Tuesday, April 12. The Association elected **Dr. Clyde Berry,** of the SUI Institute of Agricultural Medicine, as vice-president, and **Dr. S. P. Leinbach,** the retiring president, was elected to the executive committee. **Miss Thelma Luther,** of the Division of Public Health Nursing in the State Health Department, was installed as the organization's new president.

The Iowa Clinical Surgical Society held its spring meeting April 1-2 at Mercy and St. Luke's Hospitals in Cedar Rapids. A dinner meeting was held at the Cedar Rapids Country Club at which the following officers were elected: **Dr. B. J. Moon,** Cedar Rapids, president-elect; and **Dr. Donovan Ward,** Dubuque, secretary-treasurer. **Dr. E. F. Beeh,** Fort Dodge, was installed as the new president of the organization.

The fall meeting of the Iowa Clinical Surgical Society is to be held November 2-5 in Minneapolis, and the spring meeting in 1961 will be held at Des Moines.

Dr. Norman Dale Thede, an intern at St. Luke's Hospital in Cedar Rapids and a graduate of SUI, was married to **Miss Naomi Jane Arney** on Sunday, May 1, in First Methodist Church at Marshalltown. The bride is studying at St. Luke's Hospital School of Nursing.

At the annual meeting of the board of directors of the Coon Valley Heart Council on April 21, **Dr. R. E. Drown,** of Fort Dodge, was elected president.

Dr. Robert E. Hodges, an associate professor of medicine at SUI, was elected secretary-treasurer of a newly-formed professional association, The American Society for Clinical Nutrition. Formation of the ASCN was announced during the meetings of The American Society for Clinical Investigation and The American Federation for Clinical Research held at Atlantic City on May 1. Among those elected to the governing council of the ASCN was **Dr. W. B. Bean,** professor of medicine and chairman of the Department of Internal Medicine at SUI.

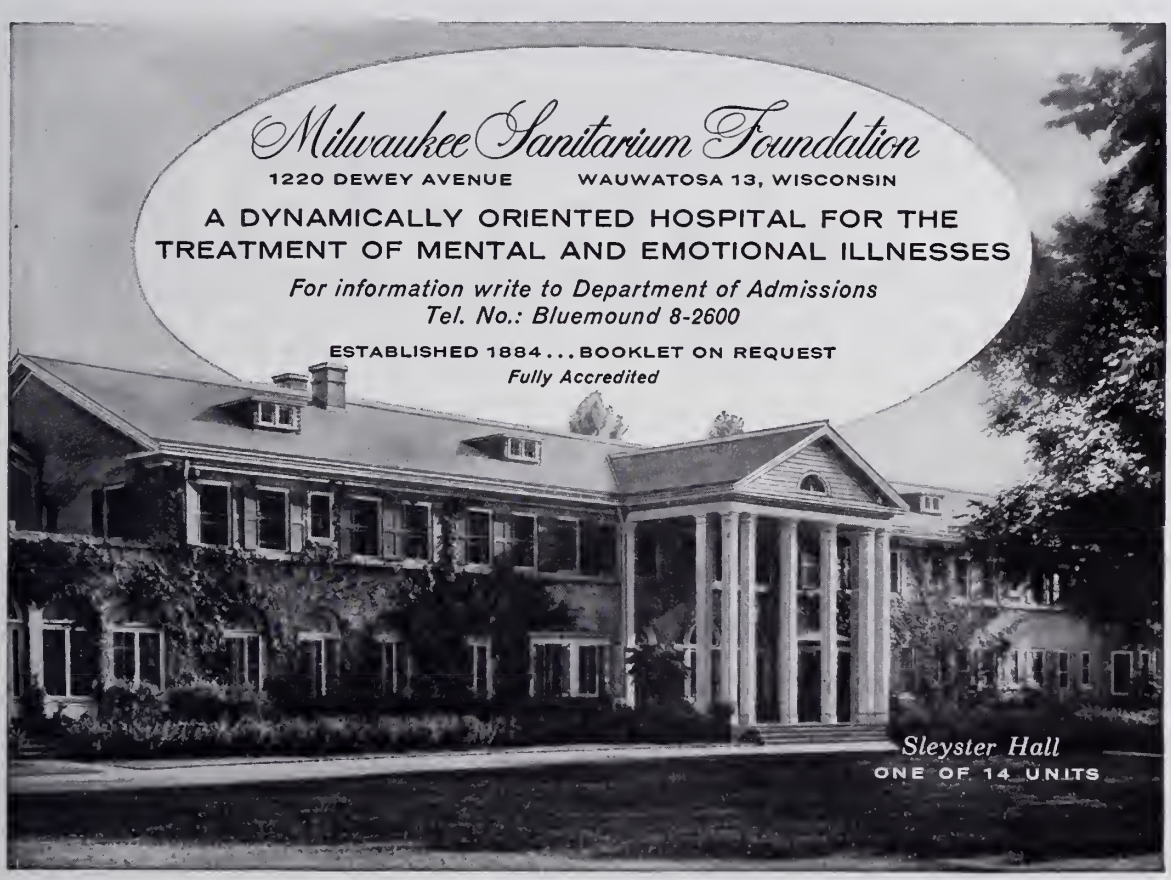
The Johnson County Medical Society held its regular meeting May 4 at the Mayflower Hotel in Iowa City. **Dr. W. W. Herman,** a pediatrician at the Poison Control Center, Cleveland Academy of Medicine, spoke on "Poisonings—With Special Reference to Activities of a Poison Control Center."

On July 1 **Dr. Patrick Garry,** of Cedar Rapids, will become associated with **Dr. Charles C. Griffin,** in Dyersville.

The National Fund for Medical Education, which collects funds for business and industry from the nation's 80 accredited medical schools, recently received a $2,000 grant from the Maytag Company Foundation, Inc. The Fund has received similar grants annually since the Maytag Foundation was established in 1953.

Dr. Stewart Kanis, of Des Moines, who will finish his internship at Broadlawns General Hospital in July, intends to go into practice at Pella late in the fall, when facilities there will be ready.

Nine papers by SUI scientists were among 32 presented at the 12th annual scientific session of the Midwestern Section of the Association for Research in Opthalmology held at the Indiana University Medical Center on April 23. Authors of the papers are **Dr. Hermann M. Burian,** professor, **Dr. Richard D. Richards,** assistant professor, and **Dr. Robert C. Watzke,** assistant professor, all in the Department of Ophthalmology; **Dr. Ralph C. Janes,** professor of anatomy; **Dr. Edgar F. Riley,** research assistant professor in the Radiation Research Laboratory; **Dr. T. Tokunaga,** research fellow in ophthalmology, and **Drs. James A. Stuart, John Dickerson, Roger S. Kirkegaard, G. K. von Noorden, R. R. Sexton,** and **Melvin L. Rubin,** all resident physicians in ophthalmology.



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An open house was held May 1 at the SUI Psychopathic Hospital and the Iowa Mental Health Authority headquarters on the SUI campus. The open house activities, which were conducted from 2:30 to 4:30 p.m. in connection with national Mental Health Week, were planned as a part of the National Association of Mental Health's "Operation Friendship," a program designed to encourage the public to visit mental hospitals. Open houses are being held in mental hospitals throughout the country in an effort to acquaint the public with some of the problems involved in mental health work.

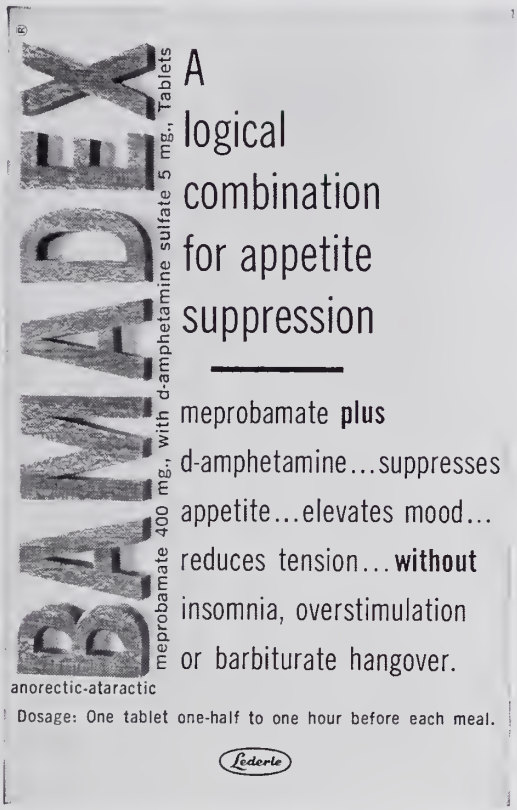
Activities at the Psychopathic Hospital's open house included tours, films, slide shows, and displays. Tours were conducted in wards, recreational therapy areas, the electroencephalography laboratory, the University's Alcoholic Clinic and occupational therapy areas. Slides were shown concerning the hospital's treatment, research and teaching programs. The Iowa Mental Health Authority open house included a tour through the new headquarters, which was moved from Des Moines to Iowa City April 1. Also featured were mental health films and displays and an explanation of the Authority's services to community mental health centers in Iowa.

Dr. William B. Bean, professor and head of internal medicine at SUI, has been elected chairman of the Board of Regents of the National Library of Medicine. A new building for the library is under construction at Bethesda, Maryland. Its dedication has been set for some time in the summer of 1961.

CHANGE IN OB.-GYN. BOARD REQUIREMENTS

In announcing that the next deadline for applications to take Part 1 or to retake Part 2 of the examinations of the American Board of Obstetrics and Gynecology, will be August 1, 1960, Dr. R. L. Faulkner, of Cleveland, secretary of the organization, announced the following changes in requirements:

"A resolution was passed at the recent annual meeting of this Board which eliminates the submission of case reports as part of the Part 1 examination. It is required, however, that each candidate eligible to take the Part 2 examination bring to the place of examination a duplicate list of hospital admissions as submitted with his or her application. *This change in requirements is not retroactive and therefore applies to candidates making application for the 1961 examinations.* It has also been resolved by members of the Board that applications for appraisal of incomplete training will no longer be accepted for review by the Residency Review Committee."



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DEATHS

Dr. Frank Ernest Sampson, 93, of Creston, a retired physician and surgeon, died Thursday, April 21, in Greater Community Hospital in Creston. Dr. Sampson had practiced in Creston from 1893 until his retirement in 1931.

Dr. W. H. Halloran, 75, of Audubon, died at his home Monday, May 2. He was a former county coroner and city health officer and had been a physician in Audubon for 45 years.

Dr. Thomas F. Vance, 75, of Ames, died Tuesday, April 19, at the home of his son in Bettendorf.

Dr. Howard J. Simmons, 74, of Sioux City, died Saturday, April 23, at a Sioux City hospital after an illness of three months. He practiced medicine in Sioux City from 1923 until 1936.

Dr. Clarence E. Lynn, 74, of Dubuque, died Tuesday, May 3, at Mercy Hospital there. Dr. Lynn was a native of Dubuque and with other doctors set up the Dubuque Clinic in 1924 which later became Medical Associates.

Dr. H. M. Tharp, 66, of Monroe, died Friday, May 6, at Iowa Lutheran Hospital, Des Moines. Dr. Tharp had practiced in Monroe since 1927.

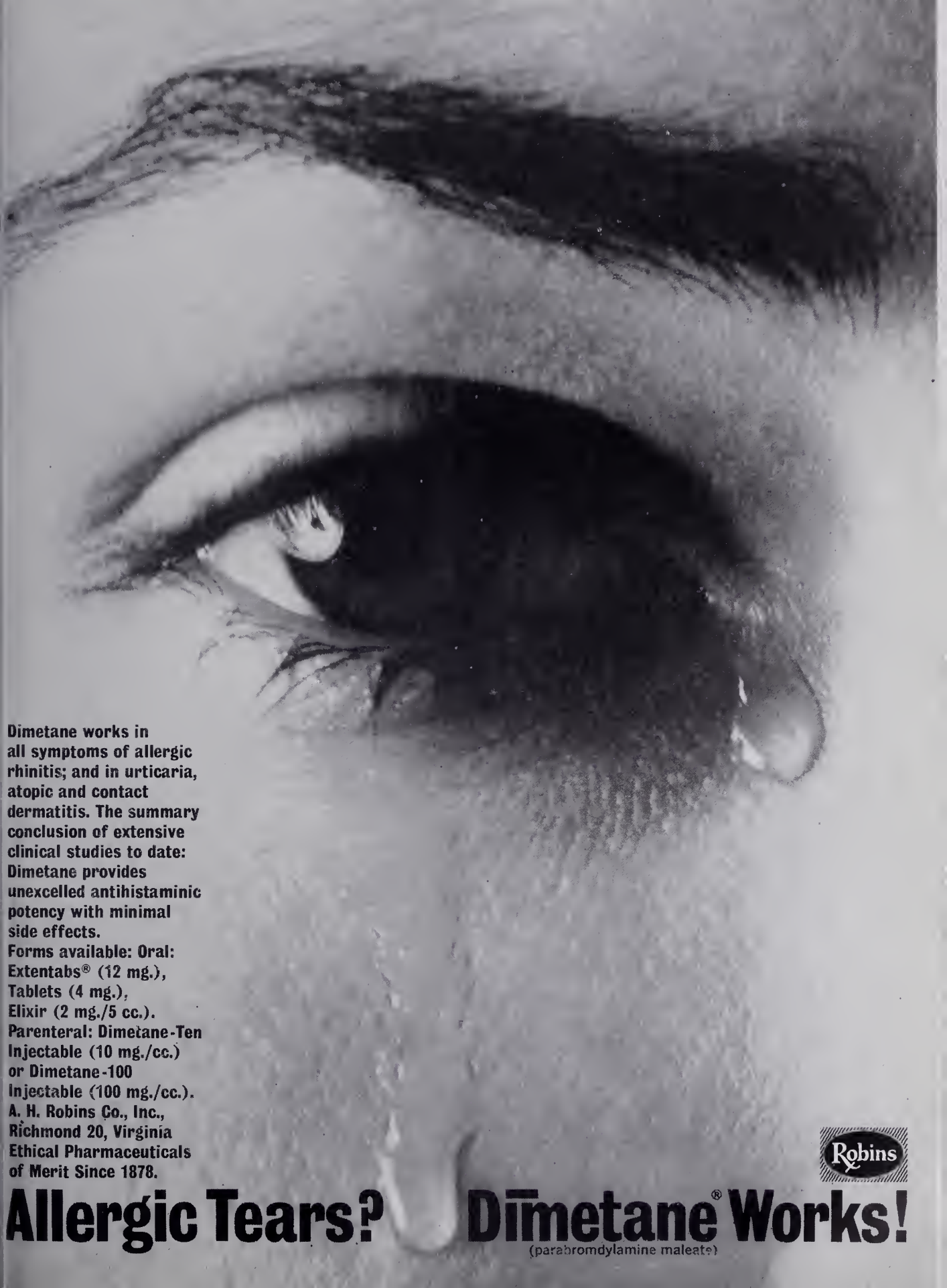
Dr. Levi J. Wilkinson, 82, of Laurel, died at his home Thursday, May 5. He had been in failing health for the last two years.

Dr. H. B. Brown, 79, of Des Moines, died on Monday, May 9, at Iowa Methodist Hospital after a brief illness. Since coming to Des Moines from Waterloo in 1944, Dr. Brown had been associated with the Veterans Administration's adjudication department.

COURSE FOR TECHNOLOGISTS AT KU

A short course in histochemistry will be given twice this summer at the Kansas University Medical Center, Kansas City, Kansas, June 6-11 and June 13-18.

It is designed to offer practical laboratory experience in freeze-drying and freeze substitution of tissues, embedding in various media and the application of several histochemical technics for lipids, proteins, enzymes and inorganic constituents of tissues. Within each week, the enrollees may devote as much time as they desire to any one or more technics. Enrollees should bring their own microscopes and lamps, laboratory coats and histochemistry books. Since enrollment will be limited, advance registration is essential. The fee will be $75 per week.



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FALLACIES IN TRAFFIC ACCIDENT PREVENTION

Following is a series of quotations from a special article on traffic safety that appeared in the April, 1960, issue of NORTHWEST MEDICINE.* The author is Mr. Joseph E. Havenner, of Los Angeles, a past-president of the Institute of Traffic Engineers.

"The term *traffic safety* is a misnomer. According to Webster *safety* means 'a condition of being safe—freedom from danger or hazard.' We really are not attempting to eliminate danger or hazard, are we? Rather, are we not trying to teach people to manage their affairs in such a manner that inherently dangerous power can be harnessed and used to advantage with efficiency?"

"We have failed to identify the problem properly. The dominant philosophy in traffic accident prevention seems to have been to approach the subject as a problem in criminology and one basically for correction through the police and the courts. There is a popular fallacy that the major source of traffic accidents can be traced to several minority groups loosely identified as: the negligent, the mentally and physically unfit, the drunk and the speeder."

"The reasoning is faulty. In the first place, the majority of all accidents involve drivers identifiable, up to the accident at least, as good drivers, good citizens and good risks, who suffer momentary lapse, or whose final human failure was caused by some unidentified source of confusion, error in judgment, or human or mechanical breakdown. Criminal intent is rarely involved in a traffic accident. Simple negligence almost always is.

"The public applauds the approach which develops the minority-attacking philosophy. The individual says, 'Good for them. It is about time somebody is doing something about all of these crazy motorists I see every day!'

"One hundred per cent of the driving public is either negligent, mentally or physically unfit, under the influence of liquor or some other stimulant, or traveling in excess of the speed limit—some of the time. Very few of the driving public are in one or more of these categories *all* of the time. And *no one* considers himself part of *any* of these categories *any* of the time.

"Having failed to identify the problem properly, we make the wrong approach to the public. Police departments are charged with responsibility of enforcing the law. . . . Among the officers' responsibilities is that of issuing traffic citations to misbehaving motorists and . . . they determine misconduct and violations of law involved in every accident. . . . To conclude that enforcement crackdowns will eliminate these wrongly identified causes is equally in error.

"The philosophy of fear and enforcement crack-

* Havenner, J. E.: Traffic safety—a rose by any other name. NORTHWEST MEDICINE, 59:560-564, (Apr.) 1960.

downs not only does not get to the heart of our problem, it fails to accomplish its objective. Actually, a safety campaign instilling fear in the motorist may cause more accidents than it prevents. I know of no other training program involving the preparing of men and women to face danger efficiently where the inducing of fear is an element of training."

"I seriously question the value of the ominous, fear-inducing safety pronouncements becoming so prominent on the approach to any national holiday. These pronouncements are misleading in regard to the relative hazard of driving over a holiday as compared to an average day, and I am sure that some day a researcher on the subject will find that a certain significant number of neurotic and hazardous fear-conscious drivers have been placed on the highway by this approach—a result directly in opposition to their well-meaning intent.

"Do not misunderstand, however. We must have consistent enforcement of reasonable traffic laws, but let us not go any further in reversing the presumption of innocence in applying traffic laws and in processing violators. We have gone too far in that direction already."

"If it is true . . . that the traffic-accident problem has been incorrectly identified, that public traffic-safety education, while tremendous in quantity, has been misdirected, . . . what must be done to improve progress in traffic safety?

"1. First and foremost, we must accelerate a program of basic research (a) to determine fundamental causes of human failure involved in traffic accidents; (b) to determine basic relationships of factors of vehicle design to traffic accidents; (c) to determine the basic relationships of factors of highway design to traffic accidents; (d) to determine the basic relationships of functions of government and traffic laws to traffic accidents; and (e) to determine the relationships of functions of government such as licensing, registration and enforcement to traffic-accident prevention.

"2. We must alter the basic philosophy of traffic-accident prevention campaigns if we are to alter driver behavior significantly.

"3. We must continue to improve the education and training of new drivers.

"4. We must achieve coordination . . . between the highway engineer, the traffic engineer, the automotive engineer, the enforcement officer, the educator and all of the other professionals who are hindered by a gross lack of familiarity with each other's problems and points of view."

"With a proper understanding of the problem, a proper identification of the basic causes and triggering elements of traffic accidents, the areas of human endeavor which breed traffic accidents can be properly managed, and the trend of increasing accident frequency can be sharply reversed."

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Vol. L JULY, 1960 No. 7

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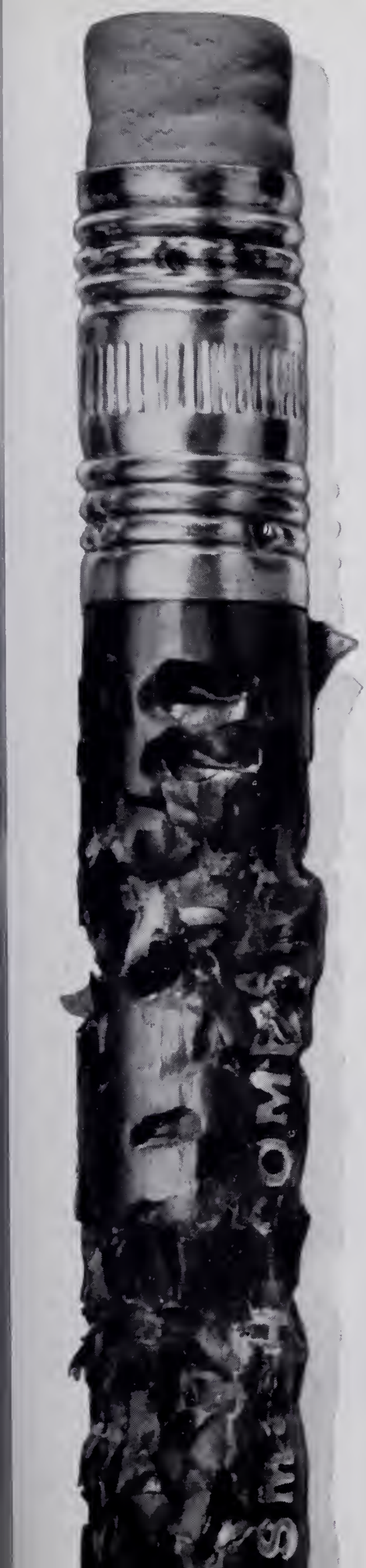
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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Second-class postage paid at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.





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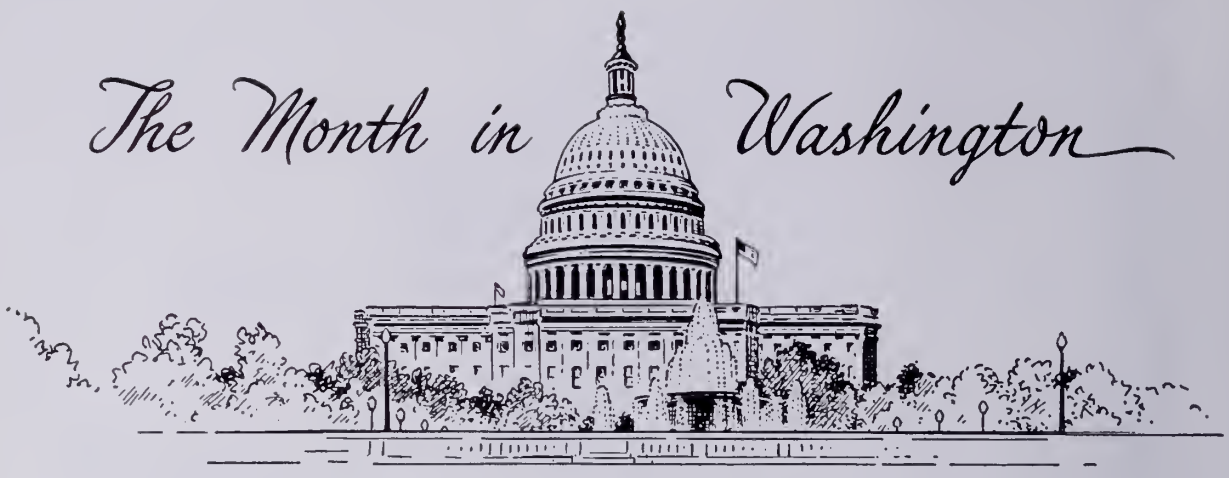
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SEARLE

The Month in Washington



Washington, D. C.—An omnibus bill approved by the House Ways and Means Committee contains two provisions of major importance to physicians—Social Security coverage for doctors and a federal-state program to provide health care for older persons with low incomes.

About 150,000 self-employed physicians would be covered by Social Security on the same basis as lawyers, dentists and other self-employed professional people now are covered. Becoming effective for taxable years ending on December 31, 1960, or June 30, 1961, self-employed physicians would be required to pay a Social Security tax of 4.5 per cent of the first $4,800 of income. Physicians also would be subject to the automatic increases in the Social Security tax in future years.

Medical and dental interns would be covered for the first time, too.

Rep. Wilbur Mills (D., Ark.), chairman of the Ways and Means Committee, was the main architect of the health program for "medically indigent" aged. It was designed to provide a broad range of hospital, medical and nursing services for persons 65 years of age and older who are able financially to take care of their ordinary needs, but not large medical expenses.

It would be up to each state to decide whether it participates in the program. The extent of participation—the number of benefits offered to older persons—also would be at the option of individual states.

The states would determine the eligibility of older persons to receive benefits under the program. However, the legislation laid down a general framework for eligibility: persons 65 years and older, whose income and resources—taking into account their other living requirements—are insufficient to meet the cost of their medical care.

The program couldn't become effective until July 1, 1961. Before putting such a program into effect, a state would have to submit to the federal government a plan meeting the general requirements outlined in the legislation.

The program would be financed jointly by the federal and state governments. Federal grants would have to be matched by participating states on the same basis as under the present old-age assistance formula.

States could elect to provide, with federal financial aid, any or all of the following benefits:

1) Inpatient hospital services up to 120 days per year; 2) skilled nursing-home services; 3) physicians' services; 4) outpatient hospital services; 5) organized home care services; 6) private duty nursing services; 7) therapeutic services; 8) major dental treatment; 9) laboratory and x-ray services up to $200 per year; and 10) prescribed drugs up to $200 per year.

The Committee put a $325 million price tag on the program for the first full year of operation —$185 million federal and $140 million state. However, this estimate could hardly be more than an educated guess of sorts. The actual cost would depend upon unpredictable factors—how many states would participate, how many benefits they would offer, and how many older persons would qualify and what services they would require.

The Committee's estimate was based on between 500,000 and 1 million elderly persons a year receiving health services under the program. If all states participated fully, the Committee said, potential protection would be provided as many as 10 million aged whose financial resources were so limited that they would qualify when they encountered serious or protracted illness.

Payments under the program would go directly to physicians and other providers of medical, hospital and nursing services.

In addition to the federal grants for the "medically indigent," about $10 million more in federal funds would be authorized for payment to states for raising the standards of medical care benefits under present public assistance programs for older persons.

The approach of the Mills program was similar to that of Point 2 of the American Medical Association's 8-point program for health care of the aged. Point 2 stated that the AMA supperted federal grants-in-aid to states "for the liberalization of existing old-age assistance programs so that the near-needy could be given health care without having to meet the present rigid requirements for indigency." Such a liberalized definition of eligibility should be determined locally, the AMA said.

Approval of the Mills plan by the Committee marked a sharp setback for organized labor leaders. But they continued their all-out pressure campaign in an effort to get Congressional approval of Forand-type legislation that would use the Social Security System to provide hospitalization and medical care for the aged. After being defeated in the Ways and Means Committee, labor union leaders and other supporters of Forand-type legislation directed their major efforts to trying to get the Senate to substitute the Social Security approach.

The Committee had been considering health-care-for-the-aged legislation intermittently for more than a year. Hearings were held on the Forand Bill last summer, but action was postponed until this year.

Prior to approving the Mills plan, the Committee rejected the Forand Bill (three times) and the Eisenhower Administration's far-reaching public assistance alternative. Both plans were opposed by the medical profession and allied groups.

While these legislative proposals were in the limelight, a little-noticed bill was enacted into law to give $50 million in relief to taxpayers burdened with taking care of ill dependent parents.

The new law permits taxpayers full deduction on federal income taxes for medical and dental expenses paid for a dependent parent 65 years of age and older. Previously, such a deduction was limited to costs in excess of three per cent of the taxpayer's adjusted gross income.

Changes in the Social Security program called for in the catch-all bill approved by the Ways and Means Committee included:

1) Eliminating the requirement that a disabled person must be at least 50 years old to be eligible for Social Security benefits.

2) Providing Social Security benefits for about 25,000 widows of workers who died before 1940.

3) Increasing the benefits of 400,000 surviving children of workers covered by Social Security.

Although all these revisions will increase costs of the program, neither the Social Security tax rate nor tax base was increased.

The revisions will mark the fifth consecutive national election year that the Social Security program, originally enacted in 1935, has been expanded. Some of the expansions have been accompanied by tax increases.

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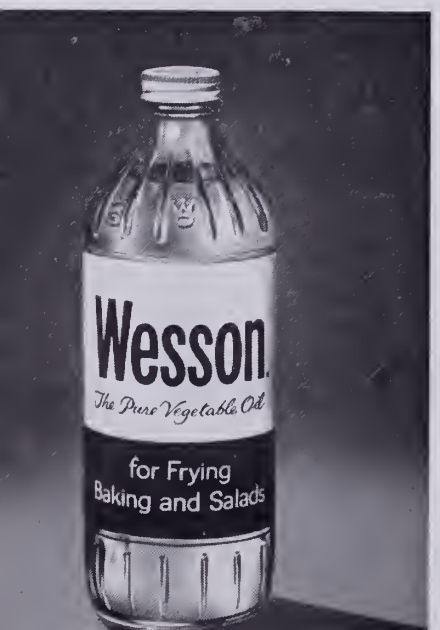
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Personals



On May 17, **Dr. M. I. Nederheiser,** of Cascade, fell and fractured his hip. He was taken to Mercy Hospital in Cedar Rapids for treatment.

Dr. Philip Spencer, formerly of Essex and now of Spokane, Washington, has presented the Essex Fire Department with a resuscitator which will be available for community use.

Dr. J. G. Clapsaddle, who has been practicing medicine in Burt for 48 years, was honored for long-time service to his community by the Burt Lions Club at a meeting on May 23. The doctor said, "I hope to practice here until the Burt folks can and do find someone to take my place." The fact that he is still very busy was demonstrated when he was called out of the meeting to care for a patient.

In an election of officers during the annual meeting of the Iowa Heart Association held at Hotel Fort Des Moines, in Des Moines, on May 26, **Dr. William Province, Jr.,** of Dubuque, was chosen as president-elect and **Dr. A. B. Hendricks,** of Davenport, was elected secretary. In a separate election, **Dr. John Gustafson,** of Des Moines, was named to a one-year post on the Association's executive committee, and **Dr. John W. Eckstein,** of Iowa City, was among those named for one-year terms as delegates to the American Heart Association.

Dr. and Mrs. R. W. Hill, of Lake Mills, were guests of honor at an open house Sunday afternoon, May 21, prior to their departure for the West Coast. Although their plans are not definite, they expect to locate somewhere in the West. Dr. Hill has practiced in Lake Mills for the past 12 years.

Dr. John R. Walker, an orthopedic surgeon with the Waterloo Surgical & Medical Group, departed June 28 for Jerusalem, where he will spend a month working with the underprivileged in a blighted area. The trip, which he will make at his own expense, is an outgrowth of his membership in the Orthopedic Letters Club, which was organized in 1948. Two years ago the members decided to pool their talents for the benefits of crippled people in less fortunate parts of the world.

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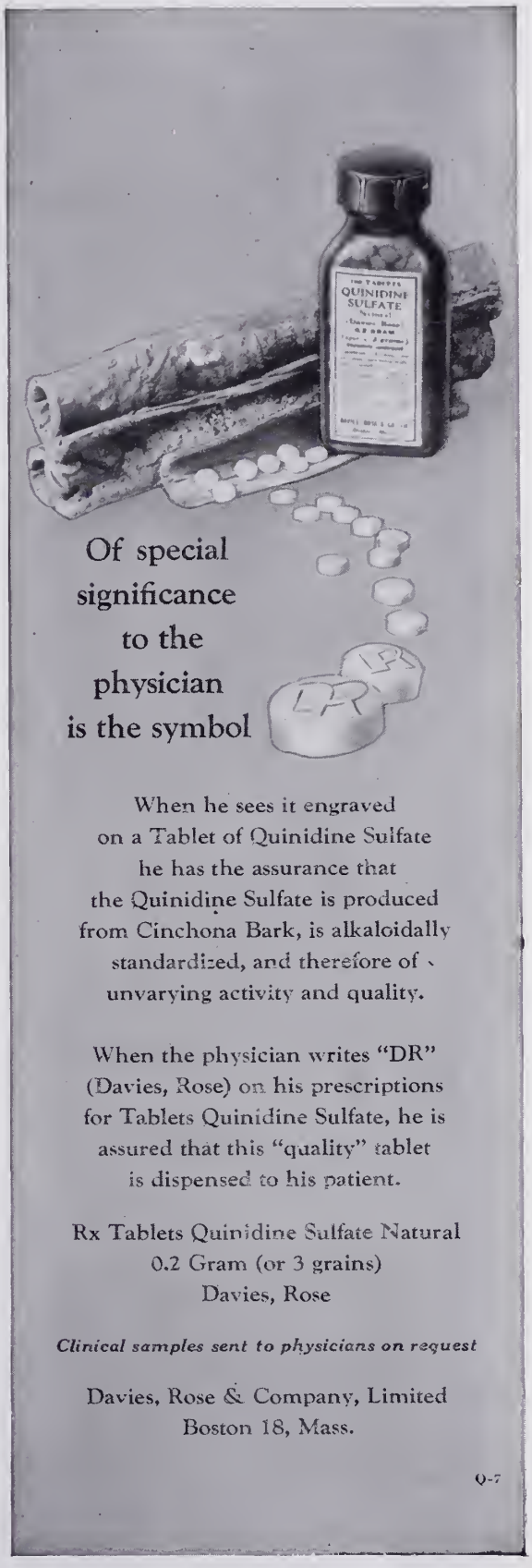
Participants in the group's "Overseas Project" have seen approximately 1,000 refugee patients and 750 non-refugees and have operated on more than 500 men, women and children. They have also donated, or obtained from prosthetics manufacturers and drug firms, more than $25,000 in equipment and supplies for use in their work abroad.

Dr. Walker's itinerary is to include stops at London and at Beirut, Lebanon, where he will lecture at the American University, and then Jerusalem. He plans to return in mid-August.

Dr. John A. Larson, the psychiatrist at the state prison in Fort Madison, was honored in May by being made a life fellow of the America Psychiatric Association. His most noteworthy contribution in the field of criminology has been the cardiopneumo psychogram test which is administered with a mechanical device popularly known as a "lie detector," but he also originated the "single fingerprint system," a technic that has now been superseded. For 30 years Dr. Larson has been working on a Greek and Latin etymology of medical and psychological terminology. The work is now completed except for checking, and will be published soon.

At the Fort Madison institution since last October, Dr. Larson has been chairman of an undermanned psychiatric unit. For the present it includes only a social worker in addition to himself, but he hopes to secure a psychologist in the near future. Group psychotherapy is the major activity of such teams and currently there are 30 active groups at the prison, with a total of about 350 men participating in them.

Twenty-eight students at the SUI College of Medicine have been awarded fellowships for research work this summer at the University Medical Center. Junior students to receive fellowships are: **Edwin Newman,** Davenport; and **Titus C. Evans, Dallas Johnson,** and **James F. Stiles,** all from Iowa City. Sophomore students are **Dale Wassmuth,** Des Moines; **Kenneth C. Anderson,** Fremont; **John Harbison,** Keosauqua; **Duane Wombolt,** Red Oak; **Paul Rohlf,** West Liberty; and from Iowa City the following: **John Rasmussen, Erwin Janssen, Stanley James, Richard Adams, Larry Brewer, Milo Farnham** and **Merlin G. Rohrssen.** Freshmen who will receive fellowships are **Howard E. Berry,** Batavia; **Stephen Curtis,** Cherokee; **Norman D. Paul,** Clarence; **Roderick Kellogg,** Des Moines; **Dwight M. Rost,** Lake City; **John W. Olney,** Marathon; **Charles Phelps,** Waterloo; and **Eugene Luckstead,** Wyoming; and from Iowa City **Robert S. Rosenberg, Maurice Chamberlain** and **Robert Bittle.** Twenty-five of the grants are for $600 each, and the remaining three are for $400.





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Dr. Lauren A. Woods, professor of pharmacology at the University of Michigan medical school, has been appointed professor and head of the Department of Pharmacology at the State University of Iowa's College of Medicine, succeeding **Dr. Erwin G. Gross**, who retired June 30. Dr. Woods, who holds an M.D., has been on the pharmacology faculty at the University of Michigan since 1946. His appointment becomes effective July 1.

Dr. J. B. Campbell, of Rockwell, discontinued his practice there effective May 27 and moved to Davenport where he has offices in the Medical Arts Building. His departure leaves Rockwell without a doctor for the first time in many years.

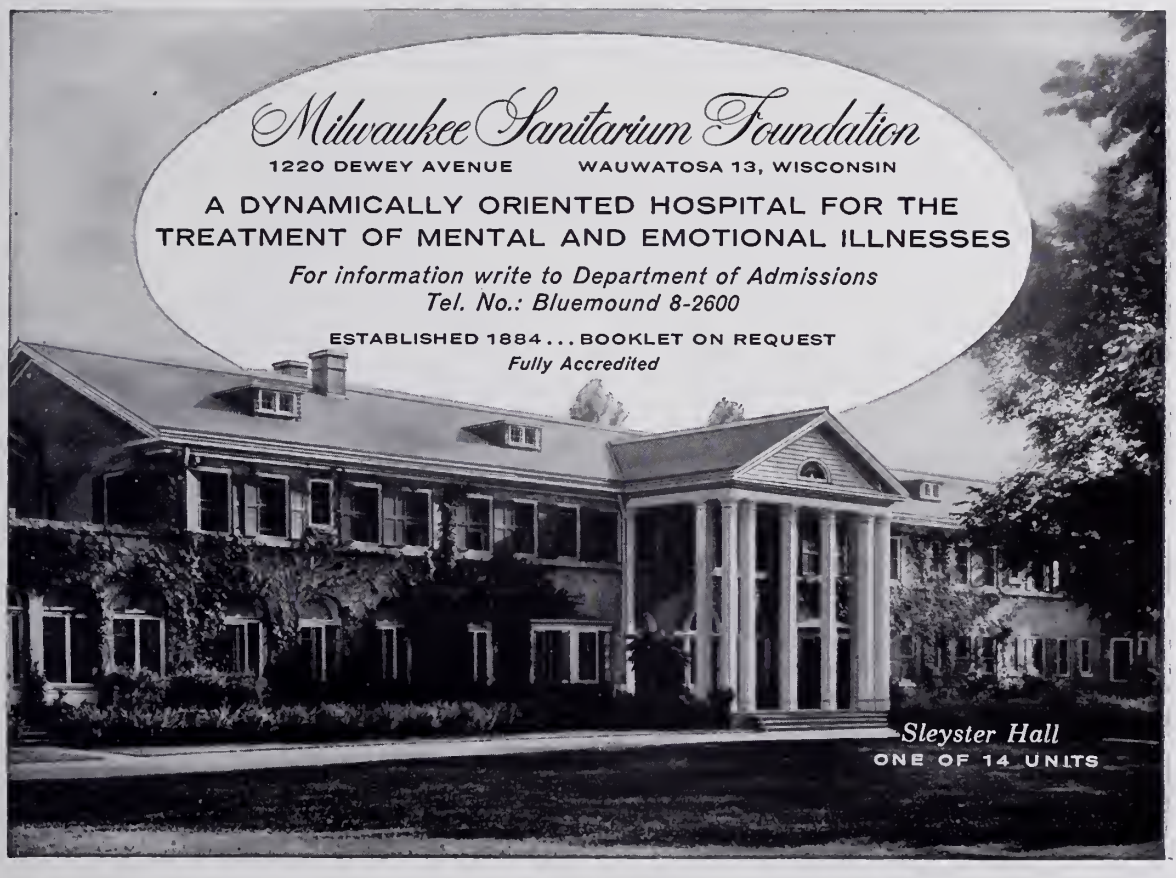
Dr. Patrick E. Garry joined **Dr. Charles C. Griffin**, of Dyersville, in the practice of medicine on June 1. Dr. Garry is a 1958 graduate of the SUI College of Medicine and has been practicing medicine in Cedar Rapids for the past two years.

The North Hill Medical Building in Burlington was officially opened on May 15. The physicians' quarters are arranged so that each doctor has a minimum of three rooms in addition to waiting and reception rooms. **Drs. Robert Todd, W. M. Crawford, H. N. McMurray, J. H. Murray, J. F. Sulzbach** and **F. A. Mayner** have suites in the building.

Dr. George B. Crow, a Burlington heart specialist, was given a 50-year pin and a certificate as the climax of a medical conference at the Hotel Burlington on May 11. **Dr. Carl Lohmann**, president of the local Society, made the presentation, citing Dr. Crow's half-century of medical service. Dr. Crow has been president of this county medical society twice, is a member of the AMA, American Diabetic Association, American Heart Association and World Medical Association, and is a fellow of the American College of Physicians.

Dr. Myron Rene Hausheer will become associated with **Dr. Dwight Conklin**, at Oakland, early in July. Dr. Hausheer served as preceptee with Dr. Conklin during the summer of 1958, and has been interning at Kansas City General Hospital in Kansas City, Missouri.

The Johnson County Medical Society held a picnic at the home of **Dr. H. R. Jenkinson**, on Lake McBride at Solon, Iowa, on June 1.



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A corporation has been formed at Woodbine, Iowa, for the purpose of erecting a modern, up-to-date medical clinic which will accommodate two physicians and a dentist. The project is in the early stages of planning. No site for the building has yet been purchased.

The Sioux Valley Memorial Hospital's annual staff meeting took place May 5 at Cherokee, and was attended by some 50 doctors and dentists from northwest Iowa. The program began in the afternoon with a talk by **Dr. John B. Gregg,** of SUI, on maxillofacial injuries. The evening program included talks by **Dr. George W. Loomis,** of University Hospital, Omaha, and by **Drs. John W. Porter, William J. Chleborad** and **William F. Karrer,** all from the Department of Surgery at the University of Nebraska College of Medicine.

Early in May, the city council of Ottumwa approved appointment of **Dr. P. D. McIntosh** as city physician succeeding **Dr. Lloyd J. Gugle.** The appointment as city physician will run concurrently with the presidency of the Wapello County Medical Society. The city physician receives no compensation under the plan.

At the annual election of the Linn County Medical Society, held May 12 at Cedar Rapids, **Dr. Robert M. Wray,** of Cedar Rapids, was chosen president-elect. Other officers elected at the same meeting were **Dr. Alfred Brendel,** of Central City, vice-president; **Dr. L. G. Carrigg,** of Cedar Rapids, secretary; and **Dr. Elliott A. Cobb,** of Cedar Rapids, treasurer. **Dr. Robert M. Chapman,** of Cedar Rapids, succeeded **Dr. E. B. McConkie,** also of Cedar Rapids, in the presidency.

Dr. A. E. Braley, professor and head of opthalmology at the State University of Iowa's College of Medicine, recently participated in a symposium on evaluation of drug therapy in neurologic and sensory diseases at the University of Wisconsin. Dr. Braley was chairman of a workshop on glaucoma. The symposium was sponsored by the National Institutes of Neurological Diseases and Blindness.

The Des Moines Medical Center, a new medical office building group located south of Mercy Hospital, is now almost fully occupied. The following doctors have recently moved into new quarters there: **Dr. M. E. Alberts,** pediatrician; **Dr. Howard G. Ellis,** surgeon; **Dr. Austin E. Schill,** obstetrician-gynecologist; **Dr. Frank C. Coleman,** pathologist; **Dr. Marvin H. Dubansky,** orthopedist; **Dr. Willard W. Hayne,** generalist; **Dr. Walter Kirch,** otolaryngologist; **Dr. Earl D. McClean,** generalist; **Dr.**

Thomas W. Milroy, anesthesiologist; **Dr. Leo R. Pearlman**, anesthesiologist; **Dr. Charles R. Peterson**, generalist; **Dr. James W. Ryan, Jr.**, anesthesiologist; **Dr. Marvin Silk**, anesthesiologist; **Dr. Floyd A. Springer**, radiologist; and **Dr. Dwight C. Wirtz**, orthopedist.

Dr. Roger L. Barrett, of Van Meter, will be leaving soon to practice pediatrics in Olympia, Washington. He has been associated during the past several months with **Dr. Allan G. Felter.**

Dr. H. Lloyd Miller, an obstetrician from Cedar Rapids, gave a paper on education for childbirth at the Pan American Medical Association meeting in Mexico City on May 6.

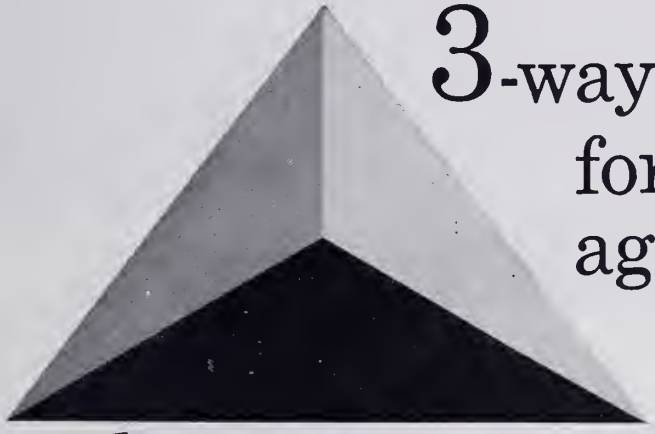
Dr. Samuel J. Fomon, associate professor of pediatrics at SUI, was guest speaker at the annual meeting of the Canadian Paediatrics Society held in Banff, Alberta, Canada, early in June. He spoke on "Requirements of Infants for Protein and Calories."

Dr. E. M. Jellinek, prominent pioneer and authority in the field of alcohol studies, lectured and conducted clinical meetings June 6-10 at the State University of Iowa's Psychopathic Hospital. His lecture topics included "Disease Concept of Alcoholism" and "Cultural Aspects of Alcoholism." Dr. Jellinek was founder and director of the Yale Summer School of Alcohol Studies, where he still lectures. He has been appointed a member of the newly created Cooperative Commission on the Study of Alcoholism.

Dr. Lawrence R. Gray, of Corpus Christi, Texas, will join **Dr. Arnold T. Nielsen**, in the practice of medicine in Ankeny, early in July. Dr. Gray is a graduate of the University of Illinois School of Medicine and interned at Iowa Lutheran Hospital, in Des Moines. Following his internship he practiced briefly with **Drs. H. C. Bone, C. J. Peisen** and **R. J. Reed** in Des Moines. He entered the Navy in 1958 and has been stationed at the Naval Air Station in Corpus Christi.

Dr. A. C. Bergstrom, of Missouri Valley, recently moved into his newly constructed medical building situated across the street from Community Memorial Hospital. **Dr. John W. Barnes**, of Woodbine, joined Dr. Bergstrom in practice early in June. Dr. Barnes is a graduate of the Creighton University Medical School and has served in the U. S. Navy.

Dr. Max Selo, a psychiatrist at the Mental Health Institute in Independence, retired in June after 58 years as a practicing doctor. He and Mrs. Selo plan to live in Omaha. Dr. Selo came to the United States from Germany in 1939, after having lost all of his money and his license to practice as a



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consequence of Nazi anti-Semitic persecution. His son, **Dr. Rudolph A. Selo**, is an anesthetist at Mercy Hospital in Council Bluffs.

Open house at the new Fort Madison Medical Center has been tentatively scheduled for some time in July. The new building is complete except for interior touching up and arrival and installation of additional furniture and some equipment. **Dr. Robert E. Murphy**, an obstetrician and gynecologist, is one occupant of the building, and he will be joined in practice by another specialist of the same sort, **Dr. John McGee**, of St. Louis, around July 1.

Dr. J. T. May, clinical director of the Mental Health Institute at Cherokee, has been elected a fellow of the American Psychiatric Association in recognition of meritorious contributions to psychiatry. Dr. May has been on the Institute's medical staff for two years, is a native of Arkansas and received his college and medical education in that state. He was a member of the Veterans Administration Hospital staff in Little Rock for several years prior to coming to Cherokee.

Dr. James W. Rathe, son of **Dr. and Mrs. H. W. Rathe**, will join the staff of Rohlf Memorial Clinic in Waverly on July 1. He is an internist. Dr. Rathe received his doctor of medicine degree from Columbla University and took his internship and residency training at Roosevelt Hospital, New York City, and University Hospitals, Iowa City.

At the annual meeting of the Iowa Association of Blood Banks, held on May 14 in Des Moines, **Miss Linda Goosen**, a medical technologist at Iowa Methodist Hospital spoke on "Blood Banking Problems in Open-Heart Surgery"; **Dr. Harold Resinger** discussed "Paternity Testing," and **Dr. Jack Spevak** talked on "Blood Bank Responsibility in Hemolytic Diseases of the Newborn." A discussion of the medicolegal aspects of blood banking was moderated by **Mr. Donald Clayton**, administrator of the Minneapolis War Memorial Blood Bank.

At a business meeting which followed the scientific program, the following officers were elected: **Mr. Merwin Gibson**, Dubuque, president-elect; **Dr. Fred Dick**, Waterloo, vice-president; and **Dr. Maynard Meservey**, Des Moines, secretary-treasurer. **Dr. Wallace Rindskopf**, of Des Moines, assumed the presidency for the coming year.

Miss Joan Wallace, of Des Moines, one of the two top winners in the competition at the Hawkeye Science Fair this past spring, has won a second prize at the National Science Fair, in Indianapolis. Four first prizes and eight second prizes were awarded, the latter being $75 each.

Dr. Adrian Flatt, assistant professor of orthopedic surgery at SUI, was one of several guest speakers at an organization meeting of the woman's auxiliary to the Student American Medical Association held on May 24 at the University Hos-

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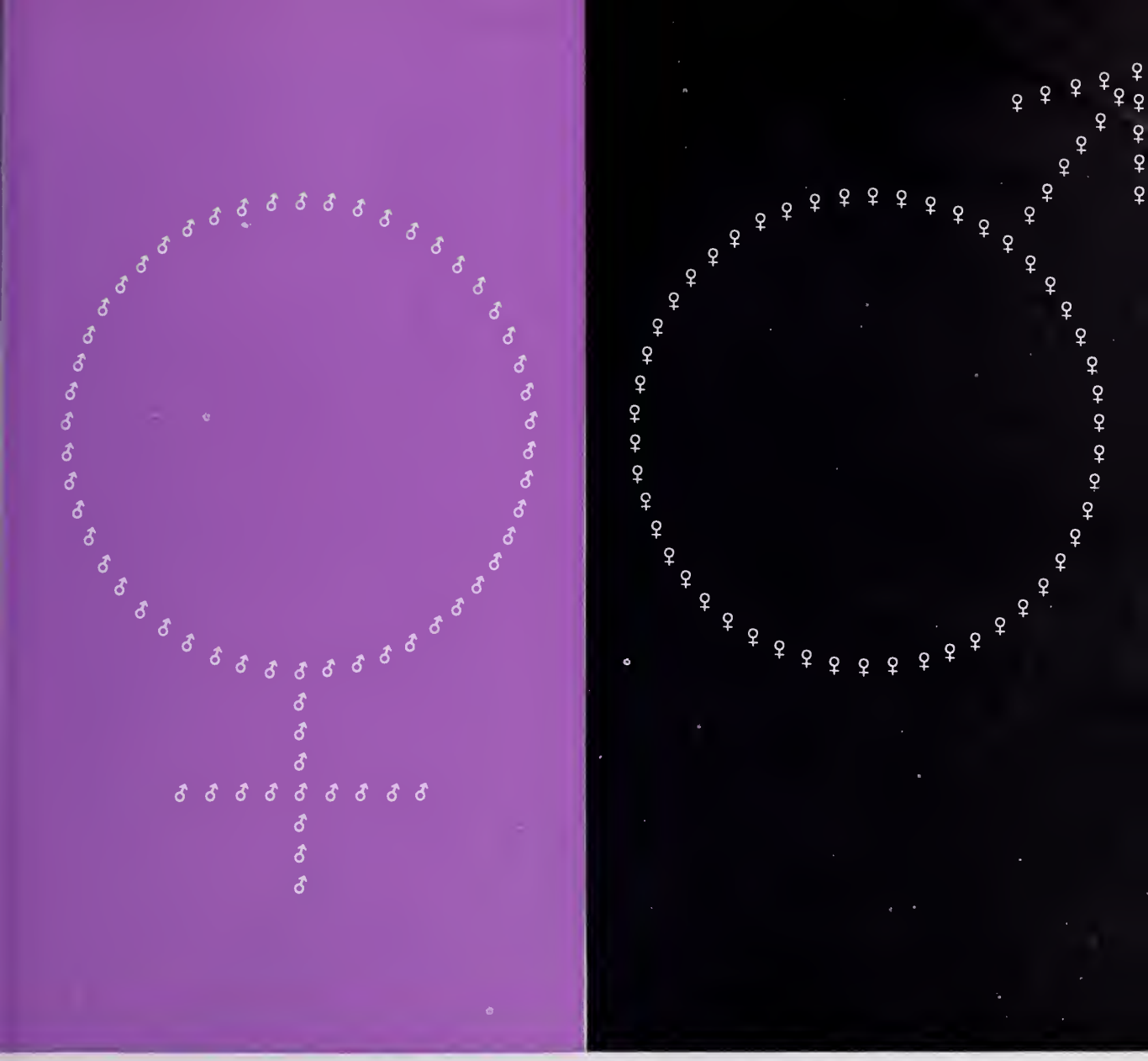
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* Marmell, M., and Prigot, A.: Tetracycline phosphate complex in the treatment of acute gonococcal urethritis in men. Antibiotic Med. & Clin. Ther. 6:108 (Feb.) 1959.

BRISTOL

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pitals amphitheater. The Iowa City group was organized this spring by ten medical wives representing the four medical fraternities and unaffiliated medical students on the SUI campus. The chapter is nationally affiliated and will join 46 other chapters.

DEATHS

Dr. Robert E. Robinson, 90, eye, ear, nose and throat specialist in the Frederika, Tripoli and Waverly areas for 60 years until his retirement three years ago, died Tuesday, May 31, at Mercy Hospital, Waterloo.

Dr. Helge Borre, 59, of Hubbard, drowned Saturday, June 4, when his sailboat capsized in choppy water on Ten Mile Lake, near Walker, Minnesota.

Dr. Arthur F. Fritchen, 65, of Decorah, died at his home May 30. He had practiced in Decorah for 40 years and was a veteran of both World Wars.

Dr. R. P. Miller, 90, a former Albia physician and hospital owner, died in January in Jamaica, Long Island. He had practiced in Albia prior to World War I, after which time he sold his hospital to the late Dr. T. E. Gutch.

NEWS ITEMS FROM THE IOWA HEART ASSOCIATION

Proceedings of a "Symposium on Prevention of Obesity" sponsored by the American Heart Association are being published in a two-part series in the May and June issues of the BULLETIN OF THE NEW YORK ACADEMY OF MEDICINE. The symposium was held in New York, May 26, 1959.

* * *

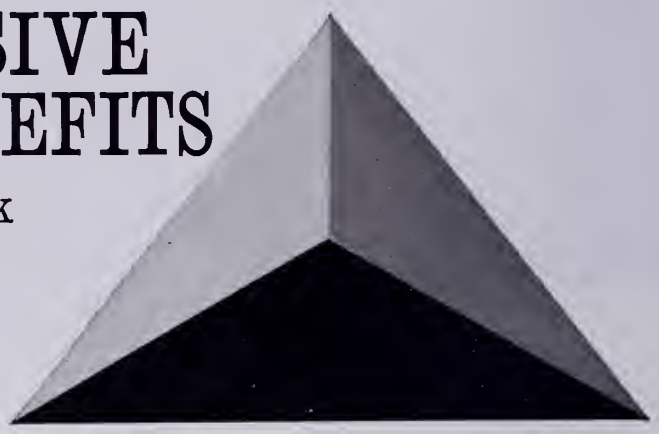
Proceedings of the "Symposium on Salt and Water Metabolism" held by the New York Heart Association last December have been printed as a monograph and are available at $2 a copy from the American Heart Association or the New York Heart Association, 10 Columbus Circle, New York City 19.

Among the main topics discussed were: "Intrarenal Sites of Salt and Water Exchange," "Lessons From Comparative Biology," "Extrarenal Regulation of Salt and Water Metabolism" and "Extrarenal Regulation of Salt and Water Exchange."

Originally printed as a supplement to the May, 1960, issue of CIRCULATION, the Proceedings were edited by Alfred P. Fishman, M.D., an assistant professor of medicine at the Columbia University College of Physicians and Surgeons.

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Pediatric Surgery, One Week, September 19
Internal Medicine, Two Weeks, October 17
Diagnostic Radiology, Two Weeks, October 17
Board of Surgery Review, Part II, Two Weeks, August 8
Gynecology, Office and Operative, Two Weeks, September 12
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Treatment of Tuberculosis in Children

A Statement by the Committee on Tuberculosis and Respiratory Diseases in Children of the American Trudeau Society

Although extensive comparative studies on the use of chemotherapeutic agents in childhood tuberculosis have not been carried out on a randomized basis, as has been done with adults, the Committee thinks that it is possible, on the basis of individual experiences and information derived from adult studies, to make certain recommendations.

USE OF DRUGS

Isoniazid. Isoniazid should be a part of every regimen for treatment of *active* tuberculosis. Although the usual dose of isoniazid for adults is 4 to 5 mg. per kg., doses as high as 30 mg. per kg. per 24 hours have been used for children without complications. It is not certain that such large doses are required; a more usual level is about 15 mg. per kg. daily taken in two or three doses.

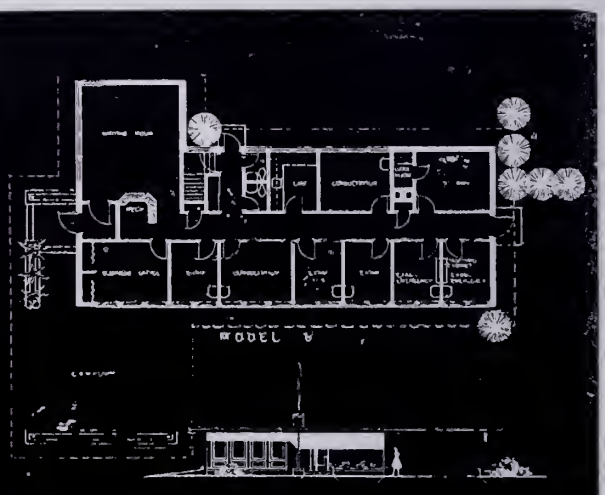
A difference of opinion with respect to the proper dosage is due to the fact that in children, as in adults, a certain (at present unknown) proportion of patients rapidly inactivate the drug and render it impotent by conjugation in the liver. To those who have used the larger doses of isoniazid, pyridoxine has not seemed to be a necessary additional drug for the prevention of neuritis in children, although it may be necessary in adolescents.

PAS. Para-aminosalicylic acid is the most commonly used second drug when a combination regimen is employed. The dosage is usually 200 mg. per kg. per 24 hours. When salts, sodium, potassium or calcium para-aminosalicylate is used, the dose should be correspondingly larger, such as 300 mg. per kg. daily. In general, children have a much better tolerance for all forms of PAS than do adults.

PAS apparently competes with isoniazid for conjugation by the liver, and should be a part of the regimen when the dose of isoniazid is in the 4 to 5 mg. per kg. range. The advantage of a double-drug regimen lies in the fact that the emergence of resistant strains of M. tuberculosis

Reprinted from AMERICAN REVIEW OF RESPIRATORY DISEASES, 81:446-448, (May) 1960.

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which takes place during rapid multiplication of organisms, is delayed or prevented.

Streptomycin. Streptomycin is not used except under special conditions. The drug is undesirable because it must be administered intramuscularly and because it is toxic, especially to the eighth nerve. The usual dose is 20 mg. per kg. per day.

Dihydrostreptomycin should not be used in pediatric practice, since it has a selective and often irreversible toxicity for the auditory division of the eighth nerve, and since adequate audiometric studies may be impossible in the very young.

The newer antituberculous drugs—such as viomycin, cycloserine and pyrazinamide—usually have no place in the treatment of tuberculous children.

Triple-drug therapy. It has not been conclusively demonstrated that administration of isoniazid, PAS and streptomycin simultaneously (so-called "triple-drug therapy") has a definite advantage over any two-drug combination that includes isoniazid, and it should be kept in mind that toxicity is increased proportionately. Therefore, "triple-drug therapy" should be reserved for the more serious forms of disease, as discussed below.

Corticosteroids. Corticosteroids should be used for the infant or young child who is dangerously ill in order to support him until antimicrobial drugs have an opportunity to produce some effect. Their routine use cannot be recommended at this time. The indications for the use of corticosteroids in pleurisy, meningitis and endothoracic primary complex will be discussed below. The usual dose is 1 mg. per kg. of prednisone per day for two to three months with gradual withdrawal.

DURATION OF THERAPY

The optimal duration of therapy is not known with precision, but the usual duration of drug therapy is at least one year and preferably 18 or even 24 months, depending on the extent and severity of the disease, the longer duration being reserved for more serious forms of disease. When streptomycin is employed in a triple-drug regimen, it should be discontinued within a month after satisfactory clinical response.

TYPES OF DISEASE

Endothoracic Primary Tuberculous Complex. Enlarged tracheobronchial lymph nodes and disease due to bronchial obstruction and/or bronchogenic spread are the most common forms of endothoracic tuberculosis in children. More extensive involvement may occasionally be seen.

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Drug therapy consisting of isoniazid and PAS should be continued for a minimum of one year. Roentgenographic findings may indicate that more prolonged therapy is necessary. Fresh pulmonary infiltrations respond quickly to drug therapy. Large mediastinal nodes and segmental involvement usually show slow changes. When endomural granuloma is the cause of obstruction, bronchoscopic removal of the granuloma may hasten the re-aeration of the segment involved. In young children with intense dyspnea caused by tuberculous bronchitis and tuberculous mediastinal nodes, marked relief may be obtained very quickly through the addition of corticosteroids.

Tuberculous Meningitis. It is the opinion of the Committee that all patients with tuberculous meningitis should receive triple-drug therapy, streptomycin being given daily (at least for a few weeks) and isoniazid in comparatively high dosage. Certainly the severely ill child, i.e., the child in coma or with suspected block, should be treated with corticosteroids; and some clinicians hold the view that all children with tuberculous meningitis should receive corticoids. There has not yet been sufficient controlled observation in children to permit the flat statement that all should receive corticosteroid therapy. The proper duration of therapy in cases of meningitis is unknown, but it would appear that treatment with isoniazid and PAS should be continued for a minimum of one year and in many cases longer, although streptomycin should be discontinued within a month after satisfactory clinical response.

Miliary Tuberculosis. Once again, triple therapy with fairly high doses of isoniazid and streptomycin is thought to be indicated during the first part of illness. Streptomycin may be discontinued after the temperature becomes normal. The patient should then continue on isoniazid and PAS for at least a year, although the optimal duration of therapy is unknown.

The corticosteroids may be used to assist in relieving extreme dyspnea associated with miliary disease.

Extrathoracic Tuberculosis. It is the opinion of this Committee that all superficial and accessible abscesses caused by tubercle bacilli should be drained as freely and as readily as the abscesses caused by other organisms. Local excision of tuberculous tissue is perfectly safe provided the patient is receiving effective antituberculous chemotherapy.

Renal Tuberculosis. The discovery of tubercle bacilli in culture in the urine, even though pyelograms reveal no evidence of deformity, calls for treatment in all cases. The reported evidence suggests that all but the very minimal cases of renal tuberculosis require a triple-drug regimen and that the duration of treatment should be two years.

Superficial Lymphadenopathy. The general problems of drainage and excision are reemphasized in

cases of superficial lymphadenopathy. The preferred treatment is drug therapy, which may be followed by local excision. Some physicians prefer to aspirate pus and to administer corticosteroids as well as antimicrobial agents; others rely entirely on the antimicrobial drugs, principally isoniazid and PAS. Experience indicates that the duration of therapy should be at least 12 months.

Tonsillectomies and adenoidectomies are not performed routinely, but should be considered on the basis of the individual problem.

Tuberculosis of Bone and Joint. The same principles of drug therapy and local excision and drainage enunciated above apply to these conditions. It is thought that in non-weight-bearing structures immobilization is not necessary and may be detrimental. In the case of weight-bearing structures, it is thought that the main problem is prevention of weight-bearing, and only now and then will prolonged immobilization be necessary. In the extremities, fusion should be avoided whenever possible.

Treatment always calls for isoniazid, usually associated with PAS. Some believe that triple-drug therapy should be used in bone and joint tuberculosis. Treatment should continue for 18 to 24 months in all cases.

Serous Effusions. All effusions should have diagnostic aspirations, and some clinicians advocate fairly complete aspiration of fluid. All patients with these manifestations of tuberculosis should receive a regimen containing isoniazid for a minimum of 12 months. Some physicians feel that the addition of steroids has some advantage in preventing pleural thickening and adhesions, and particularly pericardial adhesions.

Pulmonary Tuberculosis of the Adult Type in Children. Pulmonary tuberculosis in a child presents essentially the same problem as in adults. There is perhaps a higher incidence of this form of tuberculosis in pubertal and prepubertal girls. The same general principles regarding cavity closure and sputum "conversion" apply here as in adult tuberculosis, and the problems of the management of the open cavity are essentially the same. Thoracoplasty should by all means be avoided, although excisional surgery is often indicated.

So-called Prophylactic Treatment of the Tuberculin Converter With No Manifest Disease. If tuberculin conversion is known to have occurred within one year prior to the time of examination, it is the opinion of the majority of the Committee that all children up to 14 years should be placed on treatment, using either one or two drugs, one of which should certainly be isoniazed. The treatment should be continued for at least one year and possibly longer. Isolation and bed rest are not necessary.

When the date of conversion of the tuberculin reaction is unknown and the patient has no signs or symptoms, it is thought that for maximal safety all patients less than 36 months of age should be

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treated for at least one year. Intercurrent infections, such as measles and pertussis, increase the hazard, and therefore the need for antimocrobial therapy. It is also thought that the larger the initial tuberculin reaction, the greater the risk of the child's developing active tuberculous disease.

Both recent converters and those whose conversion date is unknown should remain under careful observation for many years, and should be closely followed in the event of intercurrent infections and as the patients approach the age of puberty.

Any tuberculin-positive child who is to receive steroid treatment for another disease should receive concurrent antituberculous treatment.

A child with a positive tuberculin reaction should receive antituberculous therapy for at least four weeks in the event of an attack of measles.

TUBERCULIN TESTING

The Committee recommends that all children should be tested intradermally with a material equivalent to 5 TU of PPD-S. The first test under ordinary circumstances should be carried out at six to eight months of age; if that test is negative, the test should be applied at least once a year thereafter, unless the child is known—or suspected—to have been exposed to tuberculosis.

In the event of known or suspected exposure to an open case of tuberculosis, a tuberculin test should be administered as soon as possible. If it is negative, it should be repeated as often as every four weeks until it becomes positive or until the longest possible period for the development of tuberculin allergy—three or four months—has passed. In the event that the contact with tuberculosis continues, the child should be tested as often as every month until contact ceases or until the tuberculin test converts. It is not yet certain whether the administration of isoniazid to an infant or young child who remains in constant contact with a case of tuberculosis, but whose tuberculin skin test is negative, will prevent infection, or whether the drug merely suppresses infection and postpones the development of tuberculin sensitivity until drug administration is stopped.

DISPLAY OF EMERGENCY HOSPITAL UNIT

The Iowa Civil Defense Administration will display a sample of a 200-bed hospital emergency unit this month at the Women's Building on the Waterloo Cattle Congress grounds. The exhibit will be open from 1:00 to 5:30 p.m., Mondays, Wednesdays and Fridays during four weeks starting July 8. All professional personnel in northeast Iowa counties are urged to inspect the facilities there. Similar exhibits will be presented elsewhere throughout the state in subsequent months.

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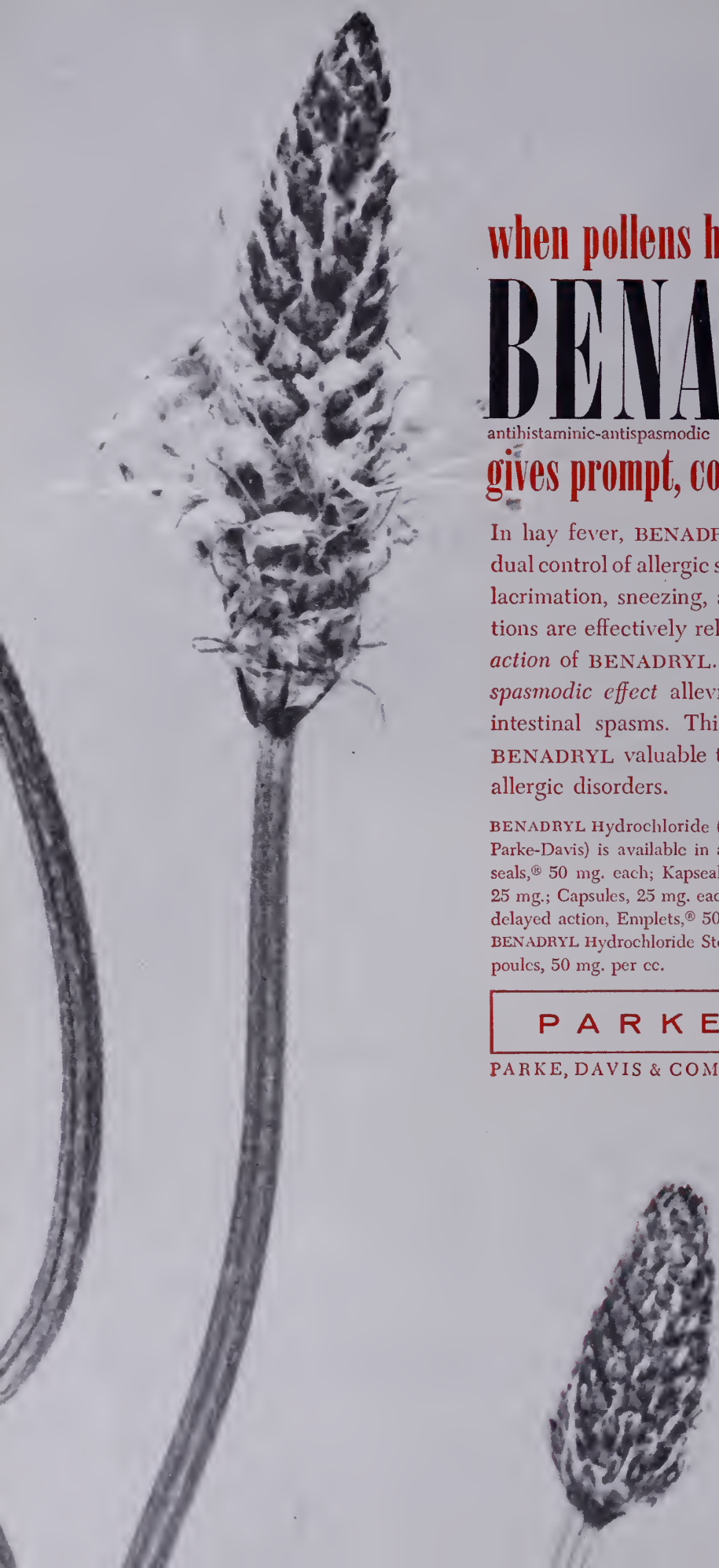
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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Second-class postage paid at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



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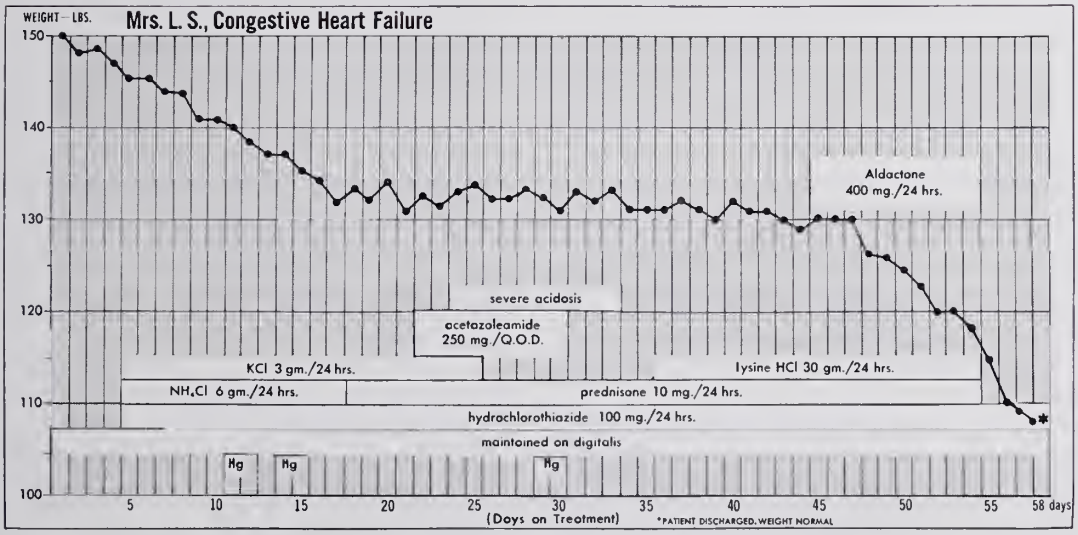
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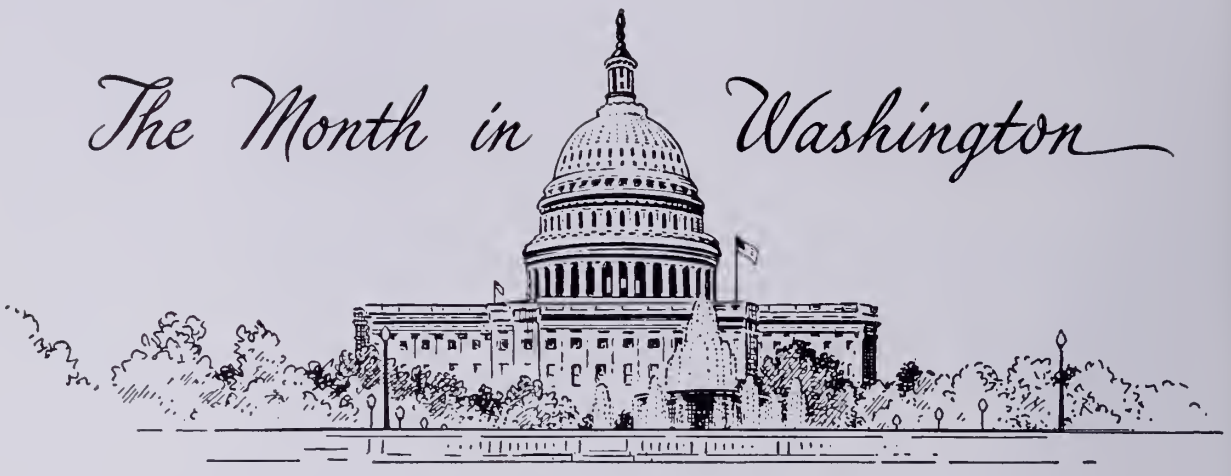
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The Month in Washington



Washington, D. C.—Congress returned to work this month to take up its unfinished business, including the controversial issue of health care for the aged, in an atmosphere dominated by election-year politics.

The three- or four-week, tag-end session of Congress loomed as one of the most important meetings in the past decade, as far as its possible impact on the medical profession is concerned.

The lawmakers are slated to decide whether to embark the federal government on a course that could threaten the private practice of medicine, or to adopt a voluntary program that would pose no such danger.

The omnibus social security bill approved by the House Ways and Means Committee was easily cleared by the House, 381 to 23, and sent to the Senate Finance Committee, which held two days of hearings. The measure contained a voluntary, federal-state program for assisting needy aged persons to meet their health care costs. Both the Administration and the American Medical Association endorsed the House measure as in keeping with the concept of giving the states prime responsibility for helping their citizens, for aiding those who are most in need of help, and for avoiding the compulsory aspects of health plans involving the social security mechanism.

A vote by the Finance Committee, headed by Sen. Harry F. Byrd (D., Va.), was scheduled for shortly after the Senate resumed operations in August. Whatever action the Committee took, however, proponents of schemes such as the Forand Bill to provide a compulsory, federal medical program promised a determined fight on the floor of the Senate.

In the event Congress should approve a government medicine plan, opponents were counting on a Presidential veto to kill the measure. The Chief Executive repeatedly has asserted in strong language his all-out opposition to any compulsory plan for health care financing.

At the Senate Finance Committee hearing, Arthur S. Flemming, Secretary of Health, Education and Welfare, renewed the Administration's flat stand against the Social Security avenue to financing health costs. Such a plan, he said, would inevitably lead to pressures for expanding the benefits and lowering or eliminating the age requirement. Under such circumstances, a 15 per cent or 20 per cent Social Security payroll tax would not be too far off, he said. "We believe it is unsound to assume that revenue possibilities from a payroll tax are limitless."

Dr. Leonard W. Larson, president-elect of the American Medical Association, told the Committee that the House bill is the "antithesis of the centralized, socialized, statist approach of the proposals advocating national compulsory health insurance."

"To those critics who call this program modest, we say that fiscal irresponsibility, unpredictable cost and maximum nationalization are not the accepted criteria for good legislation," he testified.

A spokesman for the insurance industry pointed out the "giant strides" made by private health insurance in recent years in covering aged persons. E. J. Faulkner declared that one of the most prevalent and erroneous assumptions on the matter is that most of the aged aren't able to contribute to the financing of their own health care costs.

The Social Security health bills, he said, "would impair or destroy the private practice of medicine, would add immeasurably to our already crushing tax burden, would aggravate our severe public fiscal problems, and would entail other undesirable consequences."

In other testimony, the AFL-CIO again urged enactment of a Social Security health bill; the American Optometric Association and the International Chiropractors Association urged that health benefits included in any bill include the services of optometrists and chiropractors, respectively.

On another legislative proposal of interest to the medical profession—the Keogh-Simpson Bill—

a Senate debate was scheduled this month. Sen. Gordon Allott (R., Colo.) said in a Senate speech, "I believe that this legislation will have the overwhelming support of this body."

The bill, which would encourage retirement savings by the self-employed such as lawyers, small businessmen and physicians, has already been approved by the House. The Senate bill, voted by the Senate Finance Committee, would require participating self-employed persons to establish retirement plans for their employes.

BLOOD BANK METHODS AND PROCEDURES

The 1960 revised edition of the American Association of Blood Banks' manual TECHNICAL METHODS AND PROCEDURES (108 pages) is now available. Copies can be secured from the Association, Suite 1619, 30 N. Michigan Avenue, Chicago 2, for $4 per copy to members and $5 to non-members.

The manual presents in detail time-tested methods for examining and bleeding the donor; ABO grouping, Rh-typing, crossmatching and isoagglutinin screening of O bloods; use of blood and all its fractions in both bottles and plastic bags; investigation of transfusion reactions and sterility testing; refrigeration and shipping of blood; antibody tests and pregnancy studies; diagnostic tests for erythroblastosis fetalis of the newborn; the Coombs test, etc. There are appropriate discussions of such subjects as the Rh factor, agglutination, blood storage, pitfalls in doing blood grouping and crossmatching tests, etc. The appendix includes both the NIH minimum requirements for whole blood and blood grouping serums, as well as the recently published "Standards for a Blood Transfusion Service."

The improved and revised edition, comprehensive and up to date in subject matter, is an indispensable adjunct for all blood banks and transfusion services seeking to keep informed of the latest practices and advances in this field.

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CIRCULAR NURSING UNIT

A circular nursing unit, with the rooms surrounding a central nurses' station, makes patients happier, and saves time and steps for nurses, a Rochester, Minnesota, study has shown. Results of the experiment have been presented in a new monograph published July 16 by the American Hospital Association, the eighth in a series dealing with various aspects of hospital operation.

The circular unit was constructed so that the nurses' station was encircled by a corridor around which there were 12 private rooms for patients. Clear glass panels in the upper halves of the double doors of each room allowed nurses to observe patients from their station and from the corridor. Each patient could see the nurses, but not the patients in other rooms. The patients said they felt secure because the nurses could see them at all times; they felt a sense of companionship, and they were diverted by watching the activity in the central area. Physicians and nurses also preferred the circular unit to the rectangular unit because they could keep patients under continuous observation and because it was compact.

In their conclusion, the authors of the monograph recommended that further studies be carried out to measure the effectiveness of circular units for types of care other than intensive postoperative attention.

AMERICAN TRUDEAU SOCIETY CHANGES ITS NAME

The medical section of the National Tuberculosis Association has changed its name from the American Trudeau Society to the American Thoracic Society, according to an announcement made on June 19 by James E. Perkins, M.D., the NTA managing director. The new name, he pointed out, more accurately reflects the broad interest of the membership in all diseases of the chest and respiratory tract, as well as tuberculosis.

"It seemed that the time had come," said Dr. Perkins, "for the name of the ATS to reflect the current scientific interests of the membership, reluctant as it was to relinquish the name of Dr. Edward L. Trudeau, the great physician who pioneered the treatment and research of tuberculosis and who was the first president of the National Tuberculosis Association."

The Society has a membership of more than 5,000 physicians and other scientists in North America and throughout the world. The name of its scientific journal was changed, some time ago, from THE AMERICAN REVIEW OF TUBERCULOSIS to THE AMERICAN REVIEW OF RESPIRATORY DISEASES.

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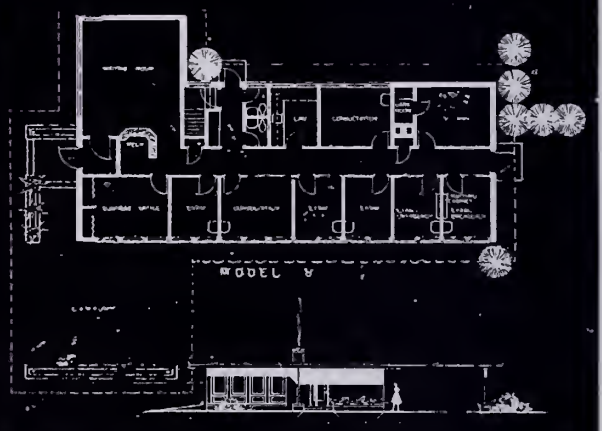
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Personals



Dr. John P. Cogley, a professor of surgery at the Creighton University School of Medicine and director of the Cogley Clinic in Council Bluffs, has been named a vice-president of the United States section of the International College of Surgeons.

A community club dinner and reception was held on June 20 at Wellman, Iowa, in honor of **Dr. Enos D. Miller.** The celebration was in tribute to his 50 years of service to the community. Dr. Miller graduated from the SUI College of Medicine in 1910 and established his practice in Wellman that same year.

Dr. George H. Scanlon, of Iowa City, has been reappointed to a five-year term on the State Board of Medical Examiners, effective June 30.

Construction on a medical center at Farmington began July 5. Plans and specifications were furnished and approved by the Sears-Roebuck Foundation. The completion date has been set for September 1.

Dr. Sidney A. Cohen, head of the pathology department of Jennie Edmundson Hospital at Council Bluffs, spoke at a meeting of the Women's Christian Association there, on Monday, June 13. His topic was "Permission to Conduct an Autopsy." Dr. Cohen emphasized the importance of autopsies to the progress of medical knowledge, how permission is requested and why it should be granted.

Dr. Stanley Haugland has moved to Lake Mills, where he has purchased the practice of **Dr. R. W. Hill.** Dr. Haugland opened his office July 1, following his internship at St. Luke's Hospital, in Cedar Rapids.

Dr. Jimmie W. Reinertson, of Roland, a 1959 graduate of the SUI College of Medicine, was among recipients of the 1960 Wyeth Laboratories pediatric residency fellowship awards. The pedi-

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Dr. Charles E. Carlson joined the staff of the Iowa State University Health Service August 1. He came to Ames directly from Belmond, where he was associated with the Steele Memorial Clinic. Dr. Carlson is a native of Minnesota. He is a graduate of Western Reserve University School of Medicine with rotating internship at the Indiana University Medical Center at Indianapolis. Following internship he took a semester of work at the School of Public Health, University of Michigan, Ann Arbor. Two years as medical officer in the U. S. Air Force followed and he then took residency training in internal medicine at the Crile Veterans Administration Hospital, Cleveland.

The Des Moines Medical Center held open house on Sunday, June 26. It is a medical office development near Mercy Hospital, providing facilities for about 23 physicians and two dentists.

Dr. Richard R. Cameron, who until recently was associated in the private practice of psychiatry and neurology with **Drs. Richard L. Sedlacek, William J. Moershel** and **William D. Trumpe,** in Cedar Rapids, has accepted the position of clinical director of the Security Mental Health Hospital, at the Men's Reformatory in Anamosa.

On July 1 **Dr. Curtis Wuest** joined **Dr. Harold Moessner** in general practice at Amana. Dr. Wuest is a graduate of Wartburg College, served three years in the Air Force and received his Doctor of Medicine degree from SUI in 1959. He served his internship at Mercy Hospital, Cedar Rapids, from July, 1959, to June, 1960.

Mr. Arthur F. Stocks, of Mason City, has been named the new executive director for the American Cancer Society, Iowa Division, Inc. Advancing from his former post as assistant director, he will assume his new responsibilities immediately, succeeding **Mr. John D. Healy** who is joining the national staff of the American Cancer Society in New York City.

Dr. J. Clark Cooper, of Villisca, was honored for his 56 years of service to his community at an open house held in the Villisca High School gymnasium June 26. Now 82 years of age, he asks, "Why should I think about retirement when I am in excellent health, and there's still a job to do?"

Dr. C. E. Lierman, of Lake View, was elected president of the Loring Hospital medical staff at a regular staff meeting June 23.

Dr. Irving C. Ringdahl, of Roland, joined the staff of Medical Associates in Dubuque on August 1. His move leaves Roland without a doctor. Dr. Ringdahl's unexpired term as Story County coroner will be filled by **Dr. William R. Bliss,** of Ames, who will serve until the state's new Medical Examiner Act becomes operative on January 1, 1961.

Dr. Richard C. Porter, of Des Moines, who has been practicing at the Beaverdale Clinic since 1945, has associated himself in general practice with the Fusco Memorial Clinic in Phoenix. The move was effective July 1.

The Iowa State Medical Society was one of 20 organizations to receive the 1959 Award of Merit of the American Medical Education Foundation given at Miami Beach on June 13. The Foundation provides a means for physicians and their wives to give financial aid to medical schools.

Dr. John B. Gregg, a professor of otolaryngology at SUI, will enter the private practice of otolaryngology, maxillofacial surgery and bronchoesophagology in Sioux Falls, South Dakota, effective August 15. After that date his address will be 1600 South Western Avenue, Sioux Falls. He will leave Iowa City August 1.

Dr. Gordon M. Arnott, of Toronto, Ontario, has opened offices for general practice in the Medical Clinic Building at Knoxville. He is a graduate of the College of Medical Evangelists, at Loma Linda, California, and interned at St. Paul's Hospital at Vancouver, British Columbia. He spent 3½ years in the United States Army and has practiced in Willowdale, Ontario, near Toronto, for the past 10 years.

Five Iowa City doctors have moved into new offices at the Towncrest Medical Center. They are **Drs. Webster B. Gelman,** and **Gerald W. Howe,** orthopedists; **Dr. Arthur C. Wise,** an ophthalmologist; **Dr. John S. Greenleaf,** a urologist; and **Dr. R. A. Simpson,** an otolaryngologist. The Center has space for four more physicians.

The Charles City planning and zoning commission has recommended the approval of a request from **Dr. Emmet V. Ayers** for the establishment of a nursing home. Approval must yet be given by the Charles City Council.

Early in July **Dr. Lawrence F. Staples,** who recently completed a three-year residency at the SUI College of Medicine, began his new duties as director of education at Iowa Methodist Hospital in Des Moines. He will work half-time in this capacity and devote the remainder of his time to the private practice of internal medicine in association with **Dr. Harold Margulies.** Dr. Staples himself was an intern at Iowa Methodist in 1955-56.

As director of education there he will co-ordinate the programs for interns and residents, and will serve as a liaison between house staff and hospital administration, and house staff and medical staff.

The new Iowa Methodist School of Nursing Education and Dormitory Building, planned to accommodate 120 student nurses, is expected to be under construction some time this month.

Mr. Donald L. Taylor, executive director of the Iowa State Medical Society, has been appointed chairman of the Committee for Study of Group Relations, and chairman of the Liaison Committee to the National Association of Medical-Dental Bureaus, both of them instrumentalities of the Medical Society Executives Association.

Dr. Abraham Gelperin, formerly director of the Des Moines-Polk County Health Department, and **Dr. Leon J. Galinsky,** of Des Moines, are co-authors of an article entitled "Reduction of Irregular Discharge Rates in a Tuberculosis Hospital," published in the June, 1960, issue of DISEASES OF THE CHEST, official publication of the American College of Chest Physicians. The report reviews the experience of these two physicians with the co-ordinated program of the Broadlawns Tuberculosis Department and the Des Moines-Polk County Health Department.

Mrs. Evelyn Eng, who has been director of nursing at Broadlawns-Polk County Hospital since 1954, and who resigned her post effective September 1 in consequence of the dismissal of **Mrs. Elizabeth Parker** as administrator, and the attendant difficulties between the staff and the hospital trustees, has been appointed director of nursing at the University of Missouri Teaching Hospital in Columbia.

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Dr. Lawrence D. Smith, of Des Moines, gave a paper on "Cellular Metabolism With Special Reference to Detoxification" before a meeting of the American College of Nutrition in Pasadena during May.

Dr. Marlin B. Ewing, assistant director of the Younker Memorial Rehabilitation Center, in Des Moines, since 1959, has accepted the position of head of the newly established Department of Physical Medicine and Rehabilitation at the University of Virginia School of Medicine.

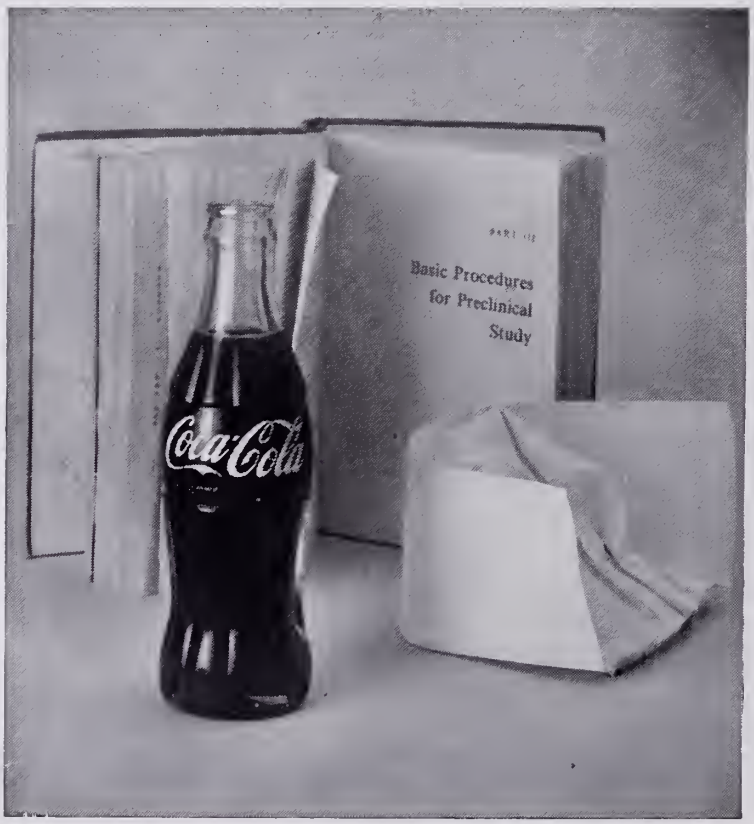
The third reading and final vote on fluoridation of the Boone water supply were scheduled for mid-July on the city council agenda. Previously the fluoridation of public water supplies was started in Jefferson on March 8, Lake View on June 23 and Cresco on June 29. The communities of Northwood and Center Point have decided on fluoridation and ordered the necessary equipment.

Nine Iowa physicians attended a week-long course in arthritis and other rheumatic diseases at the New York University School of Medicine in New York City, May 16-20. They were **Drs. Samuel J. Zoeckler,** of Des Moines; **Paul T. Cawley,** of Carroll; **John S. Chapman,** of Dubuque; **Erling Larson,** of Davenport; **C. F. Lowry,** of Council Bluffs; **Donald F. Rodawig, Jr.,** of Spirit Lake; **Maurice D. Schnell,** of Iowa City; **Ralph E. Smiley,** of Mason City, and **Andrew C. Smith,** of Waterloo. The doctors' expenses were paid by the Arthritis and Rheumatism Foundation. A similar project is being planned for November.

Doctors Park, the new medical building in Marshalltown, was completed in July. It will house offices of six physicians and surgeons. They are **Drs. Earl L. Keyser, Ralph E. Keyser, A. B. Cloud, Rufus H. Kruse, B. L. Trey** and a sixth practitioner not yet named.

In the middle of June **Dr. M. F. Joynt** of Marcus, attended the half-century reunion of his graduating class from the SUI College of Medicine. His community is planning to hold a celebration in his honor.

The Tama County Medical Society was host to the members and wives of the County Bar Association on June 9. The speaker for the evening was the **Very Rev. Msgr. Michael W. Schwarte,** president of Dowling High School, Des Moines. Rev.



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Fr. Schwarte, who has travelled widely in Africa, spoke on "Nationalism in the Sub-Sahara of Africa."

Dr. L. A. Gaukel, who for the past twelve years has served as chairman of the Park Board Commission of Onawa, was featured in a page write-up in the Farm Weekly Supplement of the SIOUX CITY JOURNAL on Monday, June 6. Illustrations showed Dr. Gaukel in various spots of the park, which has developed in the past several years as a most popular summer recreation location.

Dr. H. A. Amesbury, of Clinton, has been named a fellow in the United States Section of the International College of Surgeons.

Dr. R. A. Smith submitted his resignation as councilman of the third ward of Albia on Wednesday, June 22. Dr. Smith has been a member of the council about 10 years and was recently re-elected.

Dr. James E. Reeder, Jr., of Sioux City, was re-elected president of the Sioux City Council of Community Services at the organization's annual meeting Wednesday, June 22, at the Sheraton-Martin Hotel.

Dr. Robert S. Jaggard, of Oelwein, was chief medical officer at the Wapsipinicon section of the Fifth National Boy Scout Jamboree in Colorado Springs, which began Wednesday, July 20. Also on the sectional staff of the 1,200-boy tent unit was **Dr. C. W. Clark,** of Nashua, as assistant medical officer.

Dr. and Mrs. D. R. Webb, of Oakdale, have returned from a three-week trip in the Southeast during which Dr. Webb attended the annual sessions of the American College of Chest Physicians which were held in Miami.

A physician, a county welfare worker, a nurse and a nursing-home administrator participated in a panel discussion on their common responsibilities in the care of the elderly at the eighth annual Nursing Home Institute, held at Hotel Kirkwood in Des Moines on June 14. The physician, **Dr. W. W. Morrissey,** chairman of the Polk County Medical Society's Committee on Aging, said that all patients admitted to nursing homes should have complete physical evaluations. **Mrs. Christena Nelson,** administrator of a nursing home in Fairfield, declared, "The little things we do for a patient sometimes accomplish more than the big ones. We must train the people who work for us

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to treat the patient the way they will want to be treated when they are old."

"A place where residents may keep some of their possessions is absolutely necessary for their happiness and proper care," said **Mrs. Marjorie Jackson,** specialist in nursing cases for the Woodbury County welfare office. **Miss Ruby Deever,** a licensed practical nurse at the Thompson Nursing Home in Des Moines, said that finding time to "visit" is an important part of a nursing job well done.

Dr. and Mrs. J. F. Loeck, of Independence, attended the mental health committee meeting of the American Academy of General Practice in New Orleans in the middle of May. Dr. Loeck is on the organization's National Mental Health Committee as representative for the five-state region comprising Nebraska, South and North Dakota, Minnesota and Iowa. The purpose of the meeting was to plan future sessions and to discuss ways in which general practitioners can serve an important role in detecting and preventing mental illness in patients. The Committee strives to impress upon general practitioners the important job they have in the field of emotional illness.

Dr. David E. Price, chief of the Bureau of State Services, one of the four major bureaus of the United States Public Health Service, was principal speaker at the State University of Iowa Medical Convocation on June 9.

Doctor M. F. Armaly, a member of the medical faculty at the SUI College of Medicine, has returned to Iowa City with his family from Lebanon. Technicalities insisted upon by the Immigration and Naturalization Service hed kept him out of the country longer than he had intended. Plans are being made for a continuation of his 5-year glaucoma survey in Des Moines, the first two years of which are reported in this issue of the JOURNAL.

The physician population of the United States and its possessions increased by 4,769 in 1959, according to the AMA Council on Medical Education and Hospitals. During the year 8,269 new physicians, including 1,626 foreign trained, were licensed.

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Dr. B. J. Williamson has returned from two years of active duty in the Navy, and has resumed his partnership with **Dr. F. L. Steffey,** in Keokuk.

Dr. T. E. Kiernan, who recently completed his internship at Broadlawns-Polk County Hospital, Des Moines, became associated with **Dr. C. D. Oelrich,** of Sioux Center, in the practice of general medicine and surgery on July 1. Dr. Kiernan received his doctor of medicine degree from SUI in 1959.

Dr. James L. Knott, chief of cardiology at the Veterans Hospital in Omaha since 1957, is now practicing internal medicine in Council Bluffs in association with **Dr. Irving J. Hanssmann.** Dr. Knott is a graduate of the Creighton University School of Medicine, an associate in the Department of Medicine at the University of Nebraska and an instructor in the Creighton medical school.

Dr. Alexander Matthews has joined the Park Clinic in Mason City as a member of the surgical staff, specializing in general and thoracic surgery. He is a graduate of the State University of New York College of Medicine, in New York City, and interned at the USPHS Hospital in Boston. After four years of surgical training, he was assigned to the USPHS Hospital in Savannah, Georgia, as deputy chief of surgery. A year later, he returned to Staten Island to take a training program in thoracic surgery. He resigned July 1, 1959, and was appointed senior thoracic surgeon at Long Island College Hospital under **Dr. J. Maxwell Chamberlain.** He also was a research fellow in thoracic and cardiovascular surgery at the Roosevelt Hospital Research Laboratory.

Dr. Irfran Orer, who has been on the staff of the Mental Health Institute at Independence for the past two years, left early in July to return to his home in Istanbul, Turkey. He will establish a

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General Pediatrics, Two Weeks, October 3
Pediatric Surgery, One Week, September 19
Internal Medicine, Two Weeks, October 17
Respiratory Allergy, Two Days, September 9 & 10
Hematology, One Week, October 10
Diagnostic Radiology, Two Weeks, October 17
Board of Surgery Review, Part I, Two Weeks, November 7
Gynecology, Office and Operative, Two Weeks, September 12
Vaginal Approach to Pelvic Surgery, One Week, September 26
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private medical practice there, but said that he and his family plan to return two years from now, at which time Dr. Orer hopes to resume his post as a medical consultant at the Mental Health Institute.

Dr. Richard Lee Waste, who recently completed his internship at Mercy Hospital, Cedar Rapids, has joined **Dr. D. F. Miller**, of Williamsburg, in the practice of medicine. Dr. Waste is a native of Burlington and a 1959 graduate of SUI.

On Saturday, June 11, **Dr. George N. Bedell**, of Iowa City, was one of 170 physicians to receive a fellowship certificate at the 26th Annual Meeting of the American College of Chest Physicians.

Dr. Gary L. Thomas, formerly a resident in ophthalmology at SUI, has recently moved to Sacramento County, California. The JOURNAL has not been informed whether he is to continue in residency there or go into private practice.

Dr. Arthur W. Horsley, a SUI resident in internal medicine, took up the private practice of his specialty at Sioux City in the middle of June.

Dr. Clysta Ann Richard, a resident in obstetrics and gynecology at SUI, will begin in the private practice of her specialty on September 1, locating at Doctors' Park, Des Moines.

Dr. Julius Conner, a resident at Iowa Methodist Hospital, Des Moines, is moving to Washington, D. C., to enter the private practice of pediatrics there.

Dr. Joseph R. Byers, an intern at Mercy Hospital, Des Moines, is going into general practice with **Dr. John Sullivan**, of Des Moines.

Dr. John Wood, a resident of Broadlawns-Polk County Hospital, in Des Moines, is leaving to take further resident training in obstetrics and gynecology at Yale Medical School.

Dr. Scott Linge, of Fayette, is constructing a modern medical building there which will replace the 50-year-old building he now is using. It is hoped that the new facilities will be ready in a few months.

Dr. Edward Bartels, of Dubuque, disappeared while answering what purported to be a call to at-

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tend a patient on the evening of July 11. After 10 days, his body was found across the river in Illinois, and a known criminal was arrested in Alabama when he tried to sell the doctor's car. The Dubuque County Medical Society offered a reward of $1,000 for information which might lead to a solution of the case.

Dr. Rollin M. Perkins, of Davenport, announces the removal of his offices from 1005 First National Bank Building to 1601 Brady Street, Suite D.

Early in July twelve doctors arrived at the Mental Health Institute at Independence, to begin study in a new three-year residency program in psychiatry. They have signed contracts to spend at least one year at the Institute, and in some cases are expected to continue for one or two additional years. Several have already completed part of their residency study in psychiatry at other hospitals, and others have been in general practice and are going to begin their three years of residency training at Independence. The twelve are: **Dr. John H. Hege,** who has been medical director for the Ohio Oil Company; **Dr. Elmo L. Walker,** who has been in general medical practice in Mississippi; **Dr. Vernon L. Kliewer,** who has been with the Poling Neuropsychiatric Center in Wichita, Kansas; **Dr. Alfred Price Bolch,** who has been in private medical practice in Arlington, Texas; **Dr. Harry Mackie Ricketts, Jr.,** who has been with the Larned State Hospital, in Larned, Kansas: **Dr. Laszio Varga,** who recently completed his internship at Waltham Hospital, in Waltham, Massachusetts; **Dr. Donald C. Sanders,** who recently completed his internship at St. Luke's Hospital, in Kansas City, Missouri; **Dr. Roger K. White,** who has been in the U. S. Air Force; **Dr. Ralph Williams,** who recently completed his first year of psychiatric residency at the V. A. Hospital in Brockton, Massachusetts; **Dr. Edgar Basil Jackson,** who has completed one year of a phychiatric residency at the Topeka State Hospital, at Topeka, Kansas; **Dr. Tom G. Sheller,** who has been on the staff at Logansport State Hospital, in Logansport, Indiana; and **Dr. Harry Bjornstad,** who has recently completed two years of psychiatric residency training at Fairfield State Hospital, in Fairfield, Connecticut.

Four other new arrivals are filling positions on the Institute staff. They are **Dr. Donald W. Ingham,** who will be the new chief of the medical and surgical service, **Dr. Harry Oestreicher,** the new assistant clinical director and chief of the admissions and acute and intensive treatment service at the Mental Health Institute, and **Drs. J. L. Klotzek** and **Ernesto Tiangco,** who will both also be in admissions and in the intensive treatment service.

Dr. Ingham is a graduate of the Temple university medical college and completed his residency training in internal medicine at the Mayo



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Foundation. He was in private practice from 1938-1942, and from 1942-1946 was in the medical service in the U. S. Army, where he was chief of the cardiovascular disease service at Camp Carson, Colo., and later was chief of the medical service at Camp Crowder, Missouri. On his return from the service, he was in private practice in Washington, D. C., from 1946 to the present time.

Dr. Harry Oestreicher was born in Darmstadt, Germany, and received his medical training in Bern, Switzerland, and Bologna, Italy. He received his M.D. degree in Italy in 1938. He served his internship at St. Catherine's Hospital in East Chicago, Indiana, and his approved psychiatric residency training at the Veterans Administration Hospital in Lyons, New Jersey. Dr. Oestreicher has been in industrial medicine in Chicago and in Dover, New Jersey, and since 1950 has been in neuropsychiatric work at Greystone Park, New Jersey, and at the VA hospital at Lyons, New Jersey. He has also been an associate professor at New York Medical College since 1958.

Dr. J. S. Klotzek has served as house surgeon at the Wembley Hospital in London, England, and was house physician at the general hospital in South Shields, England. He completed his internship and residency training in psychiatry in the United States at Franklin Square Hospital in Baltimore, Maryland, and at Fairfield State Hospital in Newtown, Connecticut.

Dr. Ernesto Tiangco was born in Bataan, Philippines, and completed his approved internship at Mercy Hospital in Denver, Colorado. He completed his residency training at St. Mary's Infirmary in Galveston, Texas, and his approved psychiatric residency at the Colorado State Hospital in Pueblo, and at the Middletown State Hospital in Middletown, New Jersey. He has been staff psychiatrist at the Middletown State Hospital since 1959, when he completed his psychiatric residency.

DEATHS

Dr. C. A. Schreiner, 91, retired Ollie physician, died Sunday, June 19, at the home of his son, who resides at Ollie. Dr. Schreiner had been at Ollie since 1904.

Dr. Leonard J. Hospodarsky, 56, died Monday, June 27, at the Veterans Administration Hospital in Des Moines, where he had been on the staff for several years.

Dr. Robert Hughes, 58, an Ottumwa physician for 30 years, died Tuesday, June 27, of a heart attack at St. Joseph's Hospital.

Dr. Wendell B. Sperow, of Nevada, died suddenly at his home, on July 7, the victim of a heart attack. Dr. Sperow has been practicing medicine in Nevada since 1926.

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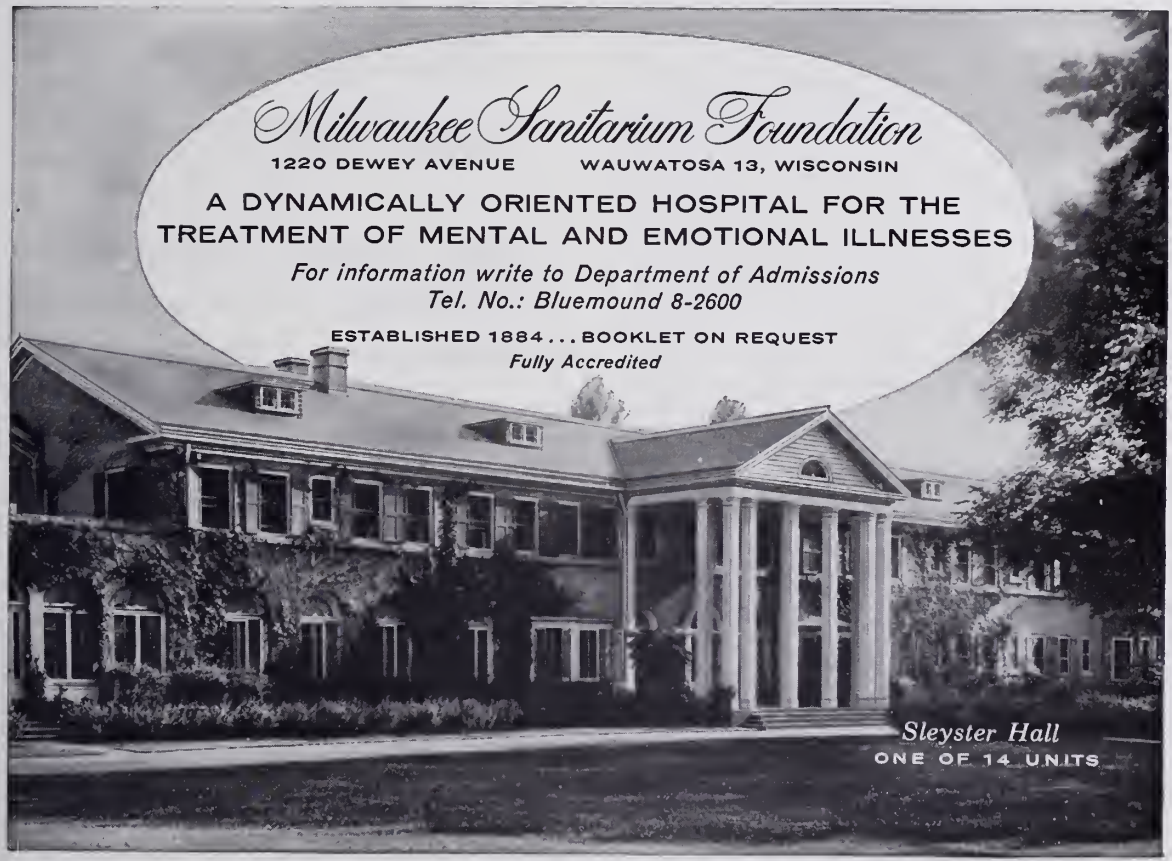
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INTERNS

Malcolm K. Baird, M.D.
Indiana University School of Medicine
Ronald K. Bunter, M.D.
S.U.I. College of Medicine
Carlyle Clawson, M.D.
University of Minnesota Medical School
Delmar C. Eggert, M.D.
S.U.I. College of Medicine
Richard C. Gasser, M.D.
S.U.I. College of Medicine
James V. Grief, M.D.
Indiana University School of Medicine
Lawrence L. Marshall, M.D.
S.U.I. College of Medicine
Donald W. Powers, M.D.
University of Wisconsin Medical School
Lewis D. Rodgers, M.D.
S.U.I. College of Medicine
John T. Teeger, M.D.
S.U.I. College of Medicine
James E. Waun, M.D.
Wayne State University College of Medicine

IOWA LUTHERAN

INTERNS

Elizabeth La Rosa, M.D. (continuing)
University of Santo Tomas, Philippines
Generosa Lucas, M.D. (continuing)
Manila Central University, Philippines
Guillermo Eloy Pomares, M.D. (October 1)
University of Havana, Cuba, and University of Seville, Spain

IOWA METHODIST

RESIDENTS

Don Ahrenholz, M.D. (surgical)
S.U.I. College of Medicine
Don Faber, M.D. (surgical)
S.U.I. College of Medicine
J. W. Reinertson, M.D. (pediatric)
S.U.I. College of Medicine

INTERNS

Eugene L. Ackoff, M.D.
University of Minnesota Medical School
Charles Crusinberry, M.D. (April)
University of Illinois College of Medicine
Patricia Hicks, M.D.
S.U.I. College of Medicine
Leland Larson, M.D.
Kansas University School of Medicine
James Rater, M.D.
S.U.I. College of Medicine
Paul B. Welty, Jr., M.D.
Tulane University School of Medicine

(Continued on page li)

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Facultad de Medicna, Madrid
Julian F. Garcia, M.D.
University of Havana, Cuba
Silvia Herrera da Azar, M.D.
Universidad Nacional de Cordoba, Argentina
Divaldo Guerra, M.D.
Havana University, Cuba
Elda Diaz Ferrer, M.D.
Havana University, Cuba
Arnold Grushnys, M.D.
Hamburg University, Germany
Zavier Puig, M.D.
University of Havana, Cuba
Joseph A. Rapagnani, M.D.
Stritch School of Medicine of Loyola University
Pedro Ramos, M.D.
University of Havana, Cuba
Steven A. Schwid, M.D.
University of Nebraska College of Medicine
Ulker P. Tezcan, M.D.
Medical School of Istanbul, Turkey
Wouter H. Verduyn, M.D.
Municipal University, Amsterdam

VETERANS ADMINISTRATION
RESIDENTS

A. F. Benetti, M.D.
From private practice in Wakefield, Michigan
Richard Hunter, M.D.
From Mercy Hospital
Howard Johnston, M.D.
From private practice in Miami, Arizona
L. J. Lawson, M.D.
University of Colorado Medical Center
G. B. Pearlstein, Jr., M.D.
From the Navy in August
R. W. Roberts, M.D.
San Bernardino County (Calif.) Charity Hospital.

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Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Second-class postage paid at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.



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*Adapted from Rebhan & Edwards.[3]

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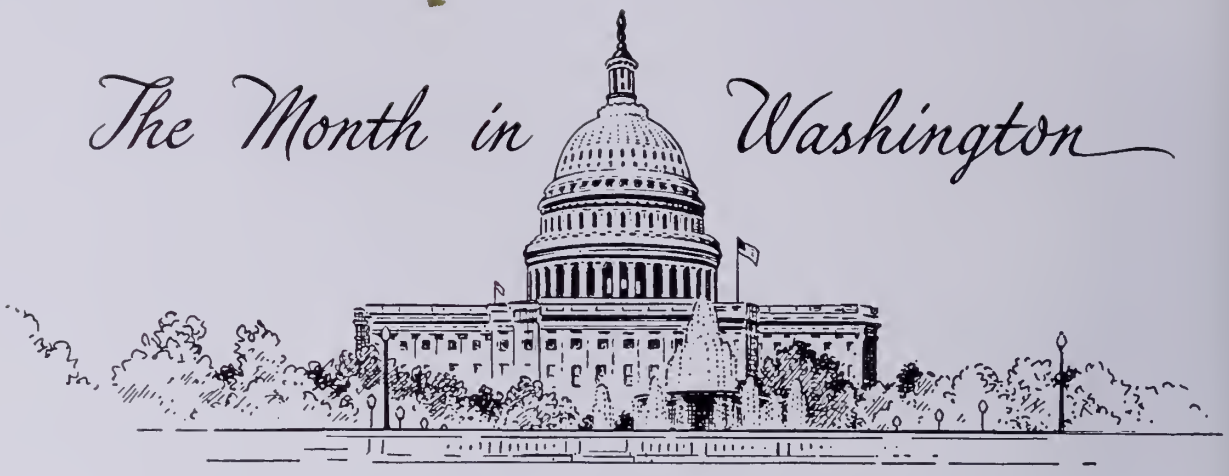


1. Eisen, H. N., and Tobachnick, M.: Protein Metabolism, M. Clin. North America 39:863 (May) 1955. 2. Jamison, R. M.: General Nutritive Deficiency, Virginia M. Month. 83:67 (Feb.) 1956. 3. Goldforb, A. F.; Nopp, E. E.; Stone, M. L.; Zuckerman, M. B., and Simon, J.: The Anabolic Effects of Norethandrolone, a 19-Nortestosterone Derivative, Obst. & Gynec. 11:454 (April) 1958. 4. Botson, R.: Investigator's Report, Feb. 11, 1956. 5. Weston, R. E.; Isaacs, M. C.; Rosenblum, R.; Gibbons, D. M., and Grossman, J.: Metabolic Effects of an Anabolic Steroid, 17-Alpha-Ethyl-17-Hydroxy-Norandrostenone, in Human Subjects, J. Clin. Invest. 35:744 (June) 1956. 6. Brown, C. H.: The Treatment of Acute and Chronic Ulcerative Colitis, Am. Pract. & Digest Treat. 9:405 (March) 1958.

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The Month in Washington



Washington, D. C.—Democrats and Republicans are campaigning on opposing planks on the issue of health care for the aged. The Democratic party advocates the Social Security approach; the Republican party favors federal aid in the field, but outside the Social Security system.

The GOP plank pledged:

"Development of a health program that will provide the aged needing it, on a sound fiscal basis and through a contributory system, protection against burdensome costs of health care. Such a program should:

"—Provide the beneficiaries with the option of purchasing private health insurance—a vital distinction between our approach and Democratic proposals in that it would encourage commercial carriers and voluntary insurance organizations to continue their efforts to develop sound coverage plans for the senior population.

"—Protect the personal relationship of patient and physician.

"—Include state participation."

The key paragraph of the Democratic plank stated:

"The most practicable way to provide health protection for older people is to use the contributory machinery of the Social Security system for insurance covering hospital bills and other high cost medical services. For those relatively few of our older people who have never been eligible for Social Security coverage, we shall provide corresponding benefits by appropriations from the general revenue."

Charles H. Percy, chairman of the GOP Platform Committee, stated that the reference to a "contributory system" in the Republican plank did not mean a Social Security tax.

Presidential and Vice Presidential candidates of both parties went into the election campaigns pledged to support the health-care-for-the-aged planks adopted by their respective conventions. Vice President Richard M. Nixon, the GOP Presidential nominee, already was on record as unalterably opposed to any program of national compulsory health insurance. The long-established position of Sen. John F. Kennedy, of Massachusetts, the Democratic Presidential candidate, has been "that only by use of the Social Security system can we have true health insurance."

Speaking for the American Medical Association, Dr. Edward R. Annis, of Miami, Fla., appeared before the platform-drafting committee of the Democratic convention at Los Angeles, and Dr. Leonard W. Larson, AMA president-elect, before the Republican policy group at Chicago.

The AMA spokesmen warned both parties that a program following the Social Security approach "would be unpredictably costly; it would unnecessarily cover millions of people; it would substitute service benefits for cash benefits; it would lead to poorer—not better—quality of medical care; it would overcrowd our hospitals; it would lead to the decline, if not the demise, of private health insurance; and it would interfere dangerously with the doctor-patient relationship, which is the solid foundation upon which effective medicine must be based."

Dr. Annis also urged support of the House-approved Mills plan to provide health care for the needy aged who need help, with the federal government and the states sharing the costs outside the Social Security mechanism.

In an advertisement run in some large daily newspapers in mid-August, the AMA outlined its reasons for supporting the Mills plan, the ad said, in part:

"The AMA believes our nation, as well as its senior citizens, will best be served by a locally administered health aid program designed TO HELP THOSE WHO NEED HELP. . . .

". . . We are equally sincere in our opposition to legislative measures that approach the problem on a shotgun basis—with the idea of increasing repeatedly the Social Security tax in order to

finance health benefits for EVERYONE who is covered by the Old Age, Survivors and Disability Insurance program, regardless of their need.

"There are many serious hazards in using the Social Security approach to finance medical and hospital care for our older citizens. When government starts telling the doctor how to practice medicine, telling the nurses how to nurse and telling the hospital how to handle its patients, the quality of medical care is sure to decline. The cost of such a program eventually would be staggering, and would make a serious dent in the pay envelopes of millions of Americans covered by Social Security. Private, voluntary health insurance, which has been doing such a magnificent job, would be undermined and, in time, destroyed.

"Most important, perhaps, is the fact that such an approach would just be the beginning of compulsory, government-run medical care for every man, woman and child in the United States. For it wouldn't be long before the federal government would be lowering the age at which people would be eligible, and adding one costly service after another to a program that would place your health under the federal government's thumb. And let's not forget that our present health care is recognized to be the world's finest."

TWELFTH WESTERN INSTITUTE ON EPILEPSY

The Twelfth Western Institute on Epilepsy is to be conducted at the University of Kansas Medical Center, in Kansas City, Kansas, on Friday and Saturday, September 16 and 17. The faculty will consist of nine professors at the KU Medical School and the following five guest speakers: John R. Green, M.D., chairman of neurology and neurosurgery, St. Joseph's Hospital, Phoenix; Leslie B. Mann, M.D., associate professor of neurology, College of Medical Evangelists; H. Houston Merritt, M.D., professor of neurology and dean, Columbia University College of Physicians and Surgeons; James L. O'Leary, M.D., professor of neurology, Washington University, St. Louis; and John A. Segerson, M.D., neurologist and electroencephalographer, Menninger Foundation.

A fee of $5 is payable by all who attend the institute. Non-members of the Western Institute on Epilepsy pay an additional fee of $20. Advance registration and payment of fees is requested. Address the Department of Postgraduate Medical Education, University of Kansas School of Medicine, Kansas City 12, Kansas.

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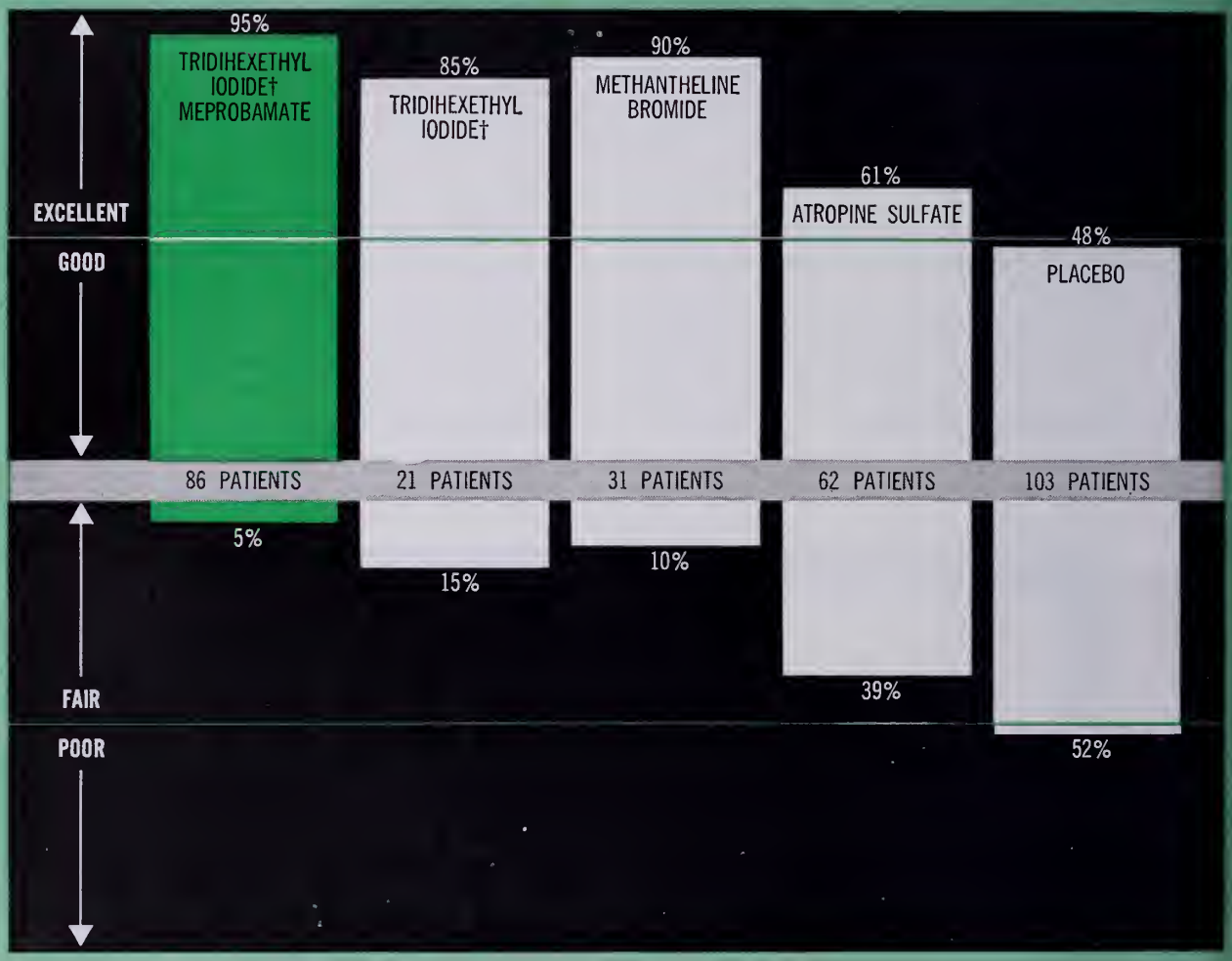
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STOMATITIS	1%	0%	28%	14%	0%
VISUAL DISTURBANCES	0%	0%	50%	34%	1%
URINARY RETENTION	0%	0%	18%	11%	1%
DROWSINESS	20%	0%	0%	0%	0%
COMPLICATIONS OR SURGERY					
HEMORRHAGE	0%	9%	3%	9%	10%
PERFORATION	0%	0%	0%	6%	0%
OPERATION	0%	5%	5%	14%	2%
RECURRENCES					
NONE	28%	23%	25%	17%	26%
FEWER AND MILDER	67%	62%	52%	37%	24%
SAME OR MORE	5%	15%	23%	46%	50%

*Atwater, J. S., and Carson, J. M.: Therapeutic Principles in Management of Peptic Ulcer. **Am. J. Digest. Dis.** 4:1055 (Dec.) 1959.

†PATHILON is now supplied as tridihexethyl chloride instead of the iodide, an advantage permitting wider use, since the latter could distort the results of certain thyroid function tests.

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Personals



Dr. John C. Stockdale has joined **Dr. George L. Vannix**, of Burlington, in the general practice of medicine. Dr. Stockdale received his M.D. degree in 1958 from the College of Medical Evangelists in Loma Linda, California, and took his internship at the Washington Sanatorium and Hospital, in Washington, D. C. Then he practiced briefly in Columbia, Missouri, where he was also county health officer.

Gifts and grants totalling $182,265 were accepted recently by the finance committee of the State Board of Regents for the SUI College of Medicine. Listed by principal researches, amount, donor and purpose, they include:

Dr. Titus C. Evans, research professor of radiology and radiobiology was given $19,000 by the National Science Foundation for stipends for participants in the summer institute in radiation biology.

Dr. Ignacio V. Ponseti, professor of orthopedic surgery, received $17,940 from the USPHS for experiments in scoliosis. His project will center on a study of the abnormal components observed in chemicals which form ligaments and cartilage.

Dr. Mansour F. Armaly, research assistant professor of ophthalmology, received $17,429 from USPHS for a collaborative glaucoma study with three other institutions in the country.

Dr. W. R. Ingram, professor and head of the Department of Anatomy, received $16,200 from USPHS for a post-doctoral neuroanatomy training grant.

Dr. Harry M. Hines, professor and head of the Department of Physiology, received $14,950 from USPHS for training program fellowships in physiology.

Dr. Juergen Tonndorf, research assistant professor of otolaryngology and maxillofacial surgery, received a grant of $14,422 from USPHS for postgraduate training in medical audiology and audiological research.

Dr. Franklin H. Top, professor and head of the Department of Hygiene and Preventive Medicine, will receive $11,535 from USPHS for a national cooperative study with 12 universities throughout the country on the epidemiology of leukemia.

Dr. Scott N. Reger, research professor of otolaryngology and maxillofacial surgery, will receive $11,160 from USPHS for a critical evaluation of audition in the aged.

Dr. Raymond F. Sheets, associate professor of

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internal medicine, will receive $5,184 from USPHS for eight medical student part-time summer research fellowships.

Dr. Margaret A. Ohlson, professor of internal medicine and director of nutrition in the University Hospitals, accepted $4,498 from USPHS for a study of the effect of dietary gluten on intestinal tissue.

Dr. George Bedell, associate professor of internal medicine, received $12,430 from the medical section of the Iowa Tuberculosis and Health Association for a teaching fellowship in chest diseases and a study of oxygen therapy in emphysema.

Dr. Ian M. Smith, assistant professor of internal medicine, and **Dr. Henry E. Hamilton,** associate professor of internal medicine, received $6,050 and $4,850, respectively, from the Iowa Tuberculosis and Health Association. Dr. Smith will use his for a study aimed at identifying the number of people in Iowa who have sarcoidosis. Dr. Hamilton will use his grant for a study of the mechanics and physiology of the cough.

Dr. Carroll Larson, professor and head of the Department of Orthopedic Surgery, received $7,782 from the W. C. Booth estate, Spirit Lake, to be used for orthopedic research at the discretion of the governing board of Children's Hospital.

Dr. Ralph Janes, professor of anatomy, will receive $600 from the National Council to Combat Blindness, Inc., for a fellowship awarded to **James F. Stiles,** of Des Moines, a junior at the SUI College of Medicine.

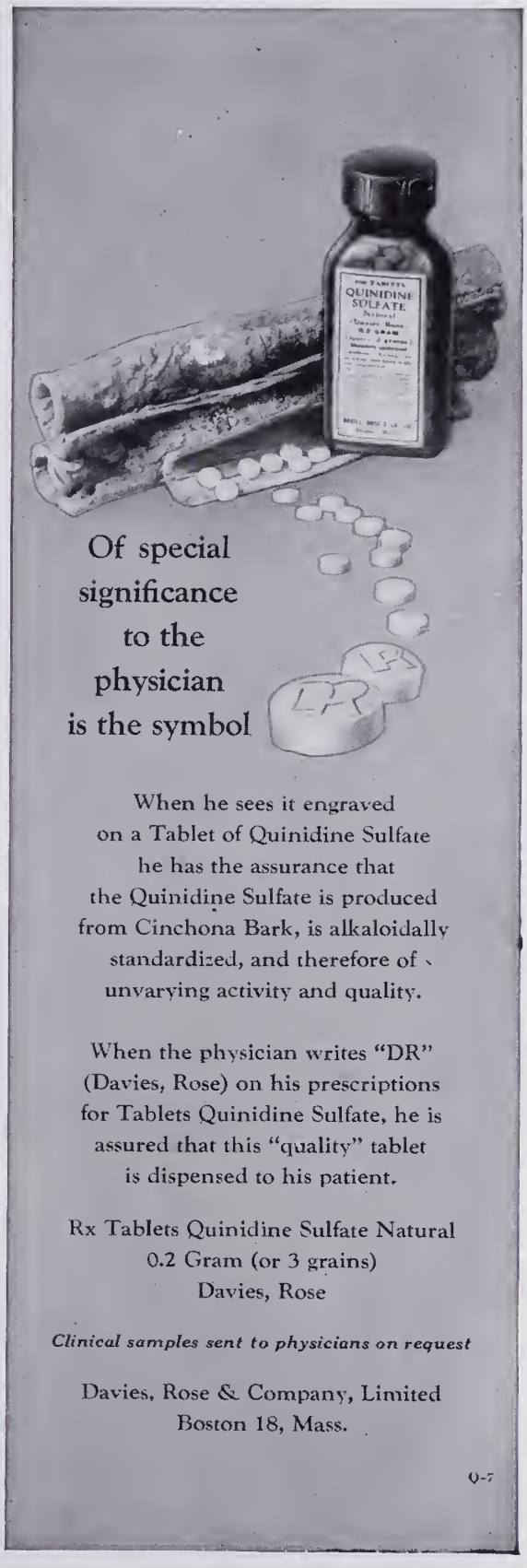
Dr. Ignacio V. Ponseti, professor of orthopedic surgery, has received $560 from individual donors to be added to the Arthur Steindler Research Fund for orthopedic research.

Dr. William K. Hamilton, professor and chairman of the division of anesthesiology, received $500 from the post-graduate medical research fund of Merck, Sharp & Dohme, to support a visiting professor in the division of anesthesiology during 1960, and $200 from Wyeth Laboratories for a visiting lecturer in anesthesiology.

Dr. Robert C. Hickey, professor of surgery and associate dean for research, was given $25 from a private donor for research on atypical and malignant growth.

The C. D. Oelrich Clinic at Sioux Center has added a new doctor to its staff. He is **Dr. Thomas E. Kiernan,** who recently completed his internship at Broadlawns Hospital, Des Moines. Dr. Kiernan received his doctor of medicine degree from the University of Iowa Medical School in 1959.

Dr. Warren C. Zabloudil, a GP, joined **Dr. H. N. McMurray** in the practice of medicine at the North Hill Medical Building in Burlington, on August 1. Dr. Zabloudil has been practicing at Preston for





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the past 10 years. His departure leaves that town temporarily without a doctor.

A physician who recently completed internship at Broadlawns Hospital in Des Moines has joined **Drs. John E. Sinning, Jack S. Crandall** and **William R. Wessels** in the practice of medicine at Marshalltown. He is **Dr. Jack E. Irvine,** a graduate of the University of Kansas School of Medicine.

A state kidnapping warrant has been issued in the July 11 disappearance and death of **Dr. Edward R. Bartels,** a Dubuque physician. Named in the warrant is **Victor H. Feguer,** of Milwaukee, Wisconsin. Feguer has been identified by several witnesses as the man seen with Dr. Bartels soon after the physician left his home to answer the call for medical aid to a fictitious Mrs. Stevens.

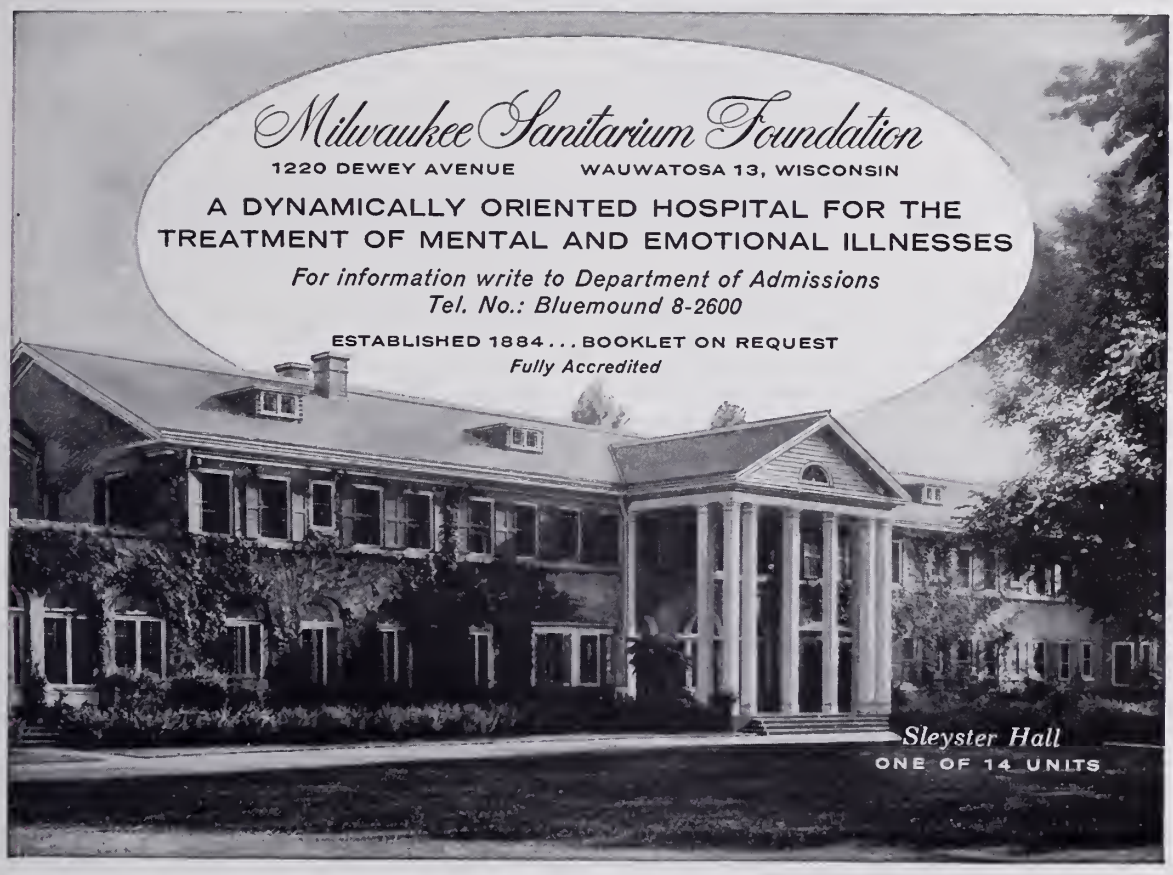
In view of the Bartels incident Sheriff Ray Gaylor is preparing letters to all Jasper County physicians offering the protection of his office. In the letters, he will advise physicians to notify him if they receive any emergency calls, day or night, from anyone not known to them. Upon receipt of such a call, Gaylor says he or Deputy Sheriff Charles Hutchins will meet the physicians at the location given by the caller to make sure it is legitimate.

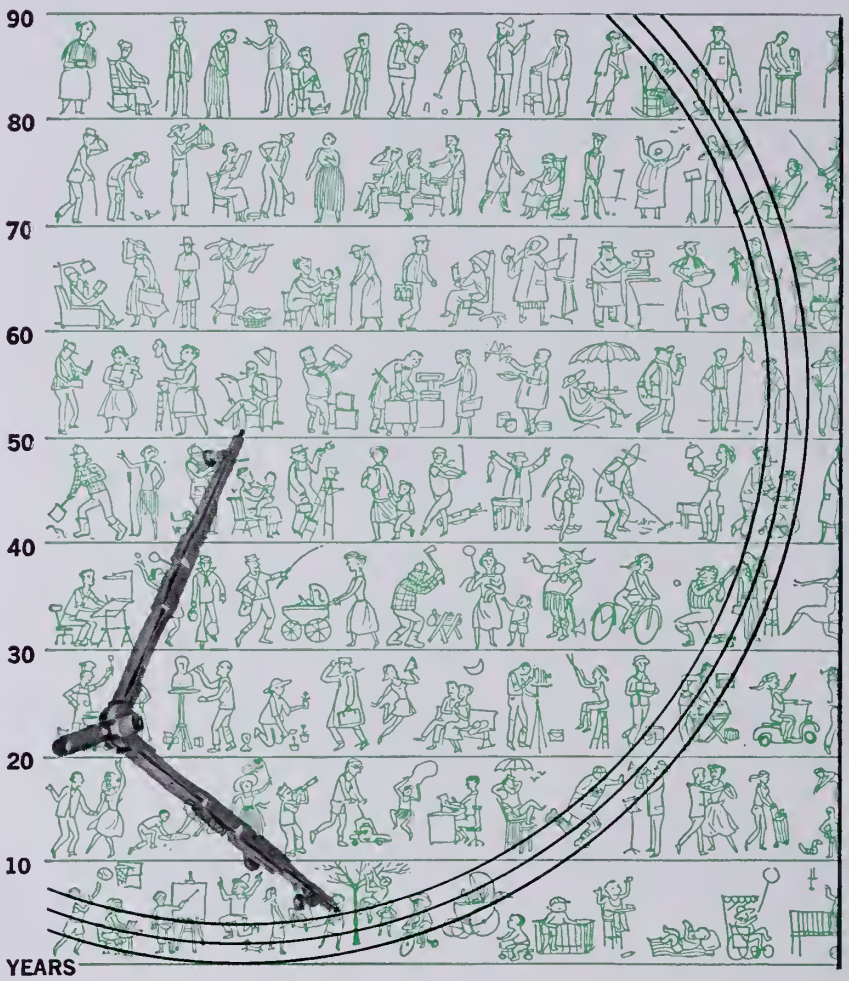
Dr. George L. York, a general practitioner, has joined **Dr. A. L. Jensen** in practice at Clinton. Dr. York received his medical degree from SUI in 1959 and completed his internship at Riverside County Hospital, in Arlington, California. While at Iowa he served as an extern in bacteriology for two years.

Dr. Michael F. Joynt, of Marcus, who has served his community for the last 50 years, was honored at a community celebration, Sunday, August 14. The afternoon program was followed by a banquet in the evening. A committee member who helped plan Dr. Joynt Day summed up the feeling of the community for the doctor when he said "It was never too cold, too hot, too late, too early, or too far for him to go when a family needed him. When we worried about his loss of sleep, the genial doctor assured us: 'If I didn't go when I was called, I wouldn't be able to sleep.' "

Dr. A. W. Horsley, an internist, has recently become associated in private practice with **Drs. Donald Wagner** and **Raymond Harrington** in Sioux City.

Dr. Richard C. Sherman has left Ackley to take up a residency in internal medicine at McKinney, Texas.





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In the past seven months the Park Clinic in Mason City has added four new doctors to its staff. **Dr. Harold L. Brenton,** an internist, joined the staff in December, 1959. He came from the Linville Clinic, in Columbia City, Indiana. **Dr. Alexander Matthews,** a thoracic surgeon, previously at the Long Island College Hospital, Brooklyn, came to the Park Clinic on July 1 of this year, and **Dr. Sophocles D. Marty,** a dermatologist who holds an M.D. degree from the Medical College of Virginia, in Richmond, and took his residency at Indianapolis General Hospital, arrived on July 11, after completing his service at the U. S. Naval Hospital in Corpus Christi, Texas. **Dr. Virgil E. Seibert,** currently with the U. S. Naval Hospital in Philadelphia, will begin practice with the Clinic in the Department of Internal Medicine around September 1.

Dr. Fred Sternagel, of West Des Moines, has announced plans for construction of a medical center at Thirteenth Street and Grand Avenue there, with space for six doctors.

Dr. Richard F. Wilker joined the Creston Medical Clinic in the general practice of medicine in mid-July. He is a native of Wisconsin, received his medical degree from SUI in 1958, interned at Lansing, Michigan, and took a year of special work in obstetrics at Pontiac, Michigan.

Three doctors of the Mental Health Institute at Cherokee completed their three-year residency training in mid-July. They are **Dr. Speros Mentis, Dr. Engracia Hernandez** and **Dr. Walter Turke.** Dr. Hernandez and Dr. Mentis both had their entire three years of psychiatric residency there. Dr. Turke took his first year at Norwich, Connecticut, coming to Cherokee two years ago. He is now serving as a Navy psychiatrist somewhere on the East Coast, but after his two years of active duty are completed he expects to return to the Institute staff.

Dr. Hernandez came to the U. S. from the Philippines in 1956 on an exchange visitor visa. She plans to remain on the staff at Cherokee for another year and then go into private practice in the Philippines.

Dr. Mentis came to the Institute 10 years ago from Athens, Greece. He interned at Mercy Hospital in Cedar Rapids, and then served three and a half years in general residency at St. Luke's Hospital there before moving to Cherokee. He plans to continue on the hospital staff at Cherokee.

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Surgery of Hernia, Three Days, October 20
General Pediatrics, Two Weeks, October 3
Electrocardiography & Heart Disease, Two Weeks, October 3
Internal Medicine, Two Weeks, October 17
Respiratory Allergy, Two Weeks, September 9 & 10
Hematology, One Week, October 10
Diagnostic Radiology, Two Weeks, October 17
Board of Surgery Review, Part I, Two Weeks, November 7
Gynecology, Office & Operative, Two Weeks, October 31
Vaginal Approach to Pelvic Surgery, One Week, November 28
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Dr. Enos D. Miller, of Wellman, was honored at a banquet, Thursday evening, July 28, at the Captain's Table, in Washington, Iowa. The banquet, sponsored by the Washington County Medical Society, was in recognition of Dr. Miller's 50 years of practice in the Wellman community. During the brief program which followed the banquet, Dr. T. M. Mast, president of the Washington County Medical Society, presented Dr. Miller with a cowhide traveling secretary, on behalf of his colleagues, and Dr. Eugene Van Epps, president of the Iowa State Medical Society, gave him a 50-year pin. Dr. Miller concluded the evening by speaking briefly on the various advances in the field of medical science during his 50 years in the profession. The picture, taken by Mr. Bob Elliott and previously published in the WASHINGTON JOURNAL shows, from left to right, Dr. Mast, Dr. Miller and Dr. Van Epps.

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Dr. Gilbert Roller, a native of Des Moines, and a 1959 graduate of the College of Medicine at SUI, is now associated with **Dr. F. J. Swift, Jr.**, of Maquoketa. For the past year Dr. Roller has been interning at the U. S. Naval Hospital in San Diego, California.

The new Medical Arts Building in Fort Dodge is now completed. The 48-room building contains six separate units to be used by five physicians and two dentists. Physician occupants will be **Dr. O. N. Glesne, Dr. John F. Kelly, Dr. Charles J. Baker, Dr. Frank S. Larsen** and **Dr. Don G. Bock.**

The 1961 Iowa Legislature is to be asked to change the new county medical examiner law so that the costs to counties will not get out of hand. Action along these lines was recommended at a meeting July 26 held at the request of Iowa Health Commissioner **Edmund G. Zimmerer.** Those attending were representatives of the state health and attorney general's departments, the Iowa State Medical Society and the Iowa Osteopathic Association. Dr. Zimmerer said it was agreed that the law should be changed so as to reduce the number of deaths that would have to be investigated by the medical examiners whom counties will appoint after next January 1. The law as it stands says that the medical examiner shall investigate the death of any person who has been "unattended by a physician during a period of 36 hours immediately preceding his death." This would require unnecessary investigations in cases of natural deaths, Dr. Zimmerer said. It was agreed that the 36-hour requirement should be eliminated. A committee was named to prepare a bill for the 1961 Legislature.

Dr. Leo R. Landhuis has joined the staff of the Kersten Clinic, in Fort Dodge, and will engage in family practice. Dr. Landhuis graduated from SUI in June, 1959, and interned for a year at Broadlawns-Polk County Hospital, in Des Moines.

Dr. Richard T. Carr is associated with **Dr. L. C. Nelson,** of Jefferson, in the practice of surgery. Dr. Carr, a native of Long Island, took his pre-medical work at Colgate University and was then graduated from the College of Medicine at Syracuse University in 1948. He interned at City Hospital in New York City and completed a five-year residency in surgery at New York University's Bellevue Medical Center. From 1954 to 1956 he served with the U. S. Air Force, and for the past three years has been practicing in California. He was certified by the American Board of Surgeons in 1958.

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Open house was held July 30 at the Fort Madison Medical Building, construction of which began last October. The upper story of the building is occupied by **Dr. Robert E. Murphy** and **Dr. John E. McGee**, both of whom specialize in obstetrics and gynecology. Another medical suite is available for occupancy on the lower floor.

For the first time, the Mental Health Institute at Cherokee has a full-time surgeon on its medical staff. He is **Dr. Thomas R. Murphy**, who since 1956 has been a fellow in surgery at the Mayo Clinic. He is a native of New Brunswick and was graduated from the medical college of Dalhousie University in Halifax, Nova Scotia.

Dr. Charles Longstreth has announced that he will quit his general practice at Carson and will begin practicing anesthesiology next month at Minneapolis. With his father, he established practice in Carson last year, just before the opening of a new community-financed building there. **Dr. Claude M. Longstreth** resumed his retirement recently.

Dr. William J. Wolf, of West Union, presented the sixth in a series of nine public lectures at Upper Iowa University the evening of July 21. His talk was entitled "Neurosis."

Walker F. Abrams, administrator of the Van Buren County Memorial Hospital, reports a marked increase in major surgery at his institution during the past six months. In all of 1959, a total of 51 major operations were performed there, but at the end of June, 1960, there had been 49 major operations performed in just six months, an increase of almost 100 per cent.

Gerhard Hartman, Ph.D., superintendent of the SUI Hospital, has received an honorary fellowship from the Australian Institute of Hospital Administrators. Dr. Hartman, now in Australia serving as an adviser to hospital administrators and to the federal health ministry, was named a fellow of the institute at the 14th Annual Meeting of the group at the University of New South Wales. His present assignment will end in September.

Four years ago Dr. Hartman went to Australia under a similar contract to advise the faculty at the University of New South Wales regarding establishment of a hospital administration program at the school.

Over 300 people attended the open house held Sunday, July 17, at the Miller Clinic building in Williamsburg. **Dr. D. F. Miller**, and **Dr. Richard L. Waste**, physicians and **Dr. Julian Gallo**, a dentist, were the hosts.

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ANDERSON, John R.	Waverly	Charles P. Hawkins, M.D., Clarion
ANDERSON, Paul M.	Marshalltown	R. P. Noble, M.D., Alta
BARBER, Richard E.	Charles City	Burns M. Byram, M.D., Marengo
BAUMANN, William C.	Durant	H. C. Hallberg, M.D., Oelwein
BECKER, Arthur A.	Brooklyn, N. Y.	Kirk H. Strong, M.D., Fairfield
BLEASDELL, Robert J.	Holstein	C. A. Waterbury, M.D., Waterloo
BOND, John T.	Independence	Walter E. Gower, M.D., Fort Dodge
BOND, Lowell D.	Buffalo Center	Charles R. Peterson, M.D., Des Moines
BOOKIN, Jerome I.	Ottumwa	E. O. Schlichtemeier, M.D., Spencer
BORGMAN, Robert L.	Pella	L. H. Jacques, M.D., Iowa City
CAMERON, Robert R.	Waukon	D. L. Moriarty, M.D., Council Bluffs
CHANNER, John M.	Fairfield	Robert V. Powell, M.D., Kingsley
CHEVILLE, Richard A.	Lamoni	F. M. Ashler, M.D., Hamburg
CONWAY, Gerald F.	Sioux City	A. C. Bergstrom, M.D., Missouri Valley
CUSTER, Norman L.	Des Moines	Ralph L. Gorrell, M.D., Clarion
DOUGHMAN, Donald J.	Bussey	M. L. Mosher, M.D., Iowa City
EVANS, Titus C., Jr.	Iowa City	H. A. Tolliver, M.D., Charles City
FISHER, Darrell E.	Mason City	Walter J. Kopsa, M.D., Tipton
GANZHORN, Jack L.	Mapleton	James H. Wise, M.D., Cherokee
GARDNER, James I.	Fairfield	Carlton W. Van Natta, M.D., West Des Moines
GARTIN, Thomas D.	Des Moines	E. E. Gamet, M.D., Lamoni
GARY, Thomas M.	Denison	F. E. Marsh, M.D., Council Bluffs
GATES, Jon Henry A.	Marcus	R. E. Clark, M.D., Manchester
GEHRING, Edith V.	Elgin	Clyde J. Smith, M.D., Gilmore City
GERBER, Henry W.	Kamrar	J. P. Gallagher, M.D., Oelwein
GOLDBERG, Robert J.	Clarinda	A. M. Pedersen, M.D., Council Bluffs
GREVE, John J.	Clinton	Robert C. McGeehon, M.D., Indianola
HAMBRECHT, Howard L.	Galesburg, Ill.	Donald F. Rodawig, M.D., Spirit Lake
HARRIS, Lowell N.	Des Moines	Howard G. Beatty, M.D., Creston
HARRISON, Earl C.	Storm Lake	Wallace H. Ash, M.D., De Witt
HAWTREY, Charles E.	Oskaloosa	D. S. Egbert, M.D., Fort Dodge
HELLER, Joseph J., Jr.	Fort Dodge	K. V. Jensen, M.D., Clarinda
HENDRICKS, James Y.	Jefferson	E. W. Paulus, M.D., Iowa City
HERMAN, John P.	Boone	Charles D. Stinard, M.D., Glenwood
HESS, John F.	Farle··	D. J. Ottilie, M.D., Oelwein
HOLDER, Donald H.	Waterloo	Joseph P. Trotzig, M.D., Akron
HUFF, Dale S.	Wate ,	D. W. Pfeiffer, M.D., McGregor
HURLBUT, Donald W.	Decorah	W. E. Walsh, M.D., West Union
JACOBS, John P.	Clinton	Wm. J. Wolf, M.D., West Union
JOHNSON, Dallas A.	Iowa Falls	Thomas R. Campbell, M.D., Sioux Rapids
KOSSOWSKY, Warren A.	Woodside, N. Y.	Roy M. Turner, M.D., Armstrong
KRIEGER, Bruce	Brooklyn, N. Y.	Verne L. Schlaser, M.D., Des Moines
LARSON, Robert C.	Eldora	Roy W. Overton, M.D., West Des Moines
LOHR, David C.	Churdan	Paul Ferguson, M.D., Lake City
LOWARY, Eldon K.	Burlington	Clayton W. Clark, M.D., Nashua
MARK, Allyn L.	Clarksville	Wm. R. Bliss, M.D., Ames
McAULEY, Erolyn J.	Greenville, N. C.	L. A. Miller, M.D., North English
MEKEMSON, Robert R.	Fort Madison	Harold C. Bastron, M.D., Red Oak
MILLER, Frank E.	Rock Island, Ill.	R. A. Knight, M.D., Rockford
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REEVES, Lane A.	Pleasanton	H. M. Andersen, M.D., Strawberry Point
REQUE, David G.	Spring Grove, Minn.	Wm. J. Wolf, M.D., West Union
RHATIGAN, Ronald M.	West Branch	Earl H. DeShaw, M.D., Monticello
ROBBINS, John C.	Emmetsburg	R. J. Smith, M.D., Stacyville
ROSENFELD, William C.	Storm Lake	Carl V. Bisgard, M.D., Harlan
ROUSE, Wayne E.	Terril	Robert C. Eaton, M.D., Clarion
RUBOTTOM, Richard L.	Buffalo, Wyo.	Dale A. Harding, M.D., Eagle Grove
RYAN, Thomas A.	Dubuque	L. B. Williams, M.D., Maquoketa
SANDOK, Burton A.	Levittown, L. I., N. Y.	Charles C. Huntley, M.D., Avoca
SANDROCK, Austin R.	Fort Madison	G. E. McFarland, Jr., M.D., Ames
SAXTON, Norval L.	Alliance, Nebr.	James E. Whitmire, M.D., Sumner
SCHIELD, Paul N.	Stanton	Scott Linge, M.D., Fayette
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SHAW, John F.	Britt	Don C. Green, M.D., Des Moines
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SORNSON, Elmer T., Jr.	Exira	Otto N. Glesne, M.D., Fort Dodge
STEINBECK, William H.	Hiawatha	Gerald E. Larson, M.D., Elk Horn
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VAN HOFWEGEN, Harold A.	Sioux City	G. F. Fieselmann, M.D., Spencer
VANDEN BRINK, Keith D.	Bayard	J. H. Sunderbruch, M.D., Davenport
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WINTER, Richard H.	Sioux City	Dwight E. Conklin, M.D., Oakland
WINTERMEYER, Laverne A.	Iowa City	Charles W. Beckman, M.D., Kalona
WOLFE, Arnold B.	Des Moines	Ivan R. Powers, M.D., Waterloo
YOUNGBLADE, Daniel M.	Sioux City	J. C. Peterson, M.D., Hartley

Dr. James R. Gilloon, who has been a fellow in internal medicine at the Mayo Foundation, is now associated in practice with **Dr. Eugene W. Coffman** and **Dr. John S. Chapman,** of Dubuque. Dr. Gilloon is a 1953 graduate of the Creighton Medical School and interned at Creighton Medical Hospital. Before taking the residency at the Mayo Foundation he was engaged in private practice at Omaha.

Dr. Gary L. Thomas has joined **Dr. G. Obregon** of Sacramento, California in the private practice of medicine, specializing in otolaryngology, maxillofacial surgery and bronchoesophagology. In an earlier issue the JOURNAL had incorrectly stated that Dr. Thomas specialized in ophthalmology.

DEATHS

Edward R. Bartels, 34, of Dubuque, was killed while answering a night call from a patient he did not know. His body was discovered some days later on the Illinois side of the Mississippi River.

KANSAS CITY SOUTHWEST CLINICAL CONFERENCE

The annual conference of the Kansas City Southwest Clinical Society will be held on October 3-5 in Hotel Muehlebach, and on October 6 at hospitals in the Kansas City area. The lecturers will include Sir Harry Platt, emeritus professor of orthopedic surgery at the University of Manchester; Matthew Block, M.D., head of hematology at the University of Colorado; Lewis L. Coriell, M.D., associate professor of immunology in pediatrics at the University of Pennsylvania; Oscar Creech, Jr., M.D., head of surgery at Tulane University; R. H. Flocks, M.D., head of urology at S.U.I.; A. James French, M.D., head of pathology at the University of Michigan; Arthur Grollman, M.D., head of experimental medicine at the University of Texas; George R. Meneely, M.D., head of the Radioisotope Center at Vanderbilt University; Henry I. Russek, M.D., a consultant in cardiovascular disease to the U. S. Public Health Service Hospitals at Staten Island and Rockaway Beach; Kenneth W. Warren, M.D., a surgeon at the Lahey Clinic; Henry L. Williams, M.D., an otolaryngologist and rhinologist

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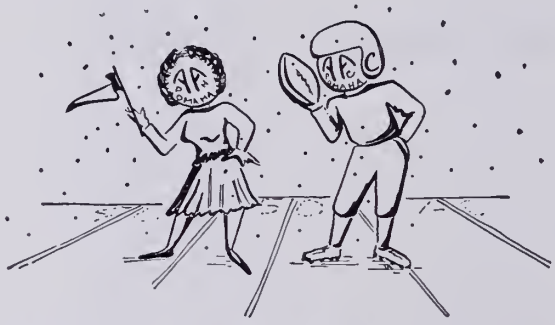
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HURRYING POSTSURGICAL PATIENTS BACK TO THEIR JOBS

Shortening the period of convalescence following surgery "may actually increase the patient's well-being rather than be a hazard to him." This opinion has been expressed by Drs. Don S. Wenger and Warner H. Gustavson, of Lackland Air Force Base, Texas, based on a comparative study of postoperative convalescence in Air Force and civilian patients.*

Evidence suggests that the Air Force returns men to duty after a convalescence only half as long as that required by comparable civilian patients. Their study covered 285 Air Force patients on whom surgery was performed in 1957, 1958 and 1959. A comparison of postoperative days off the job at Lackland and in large industry showed the following: tonsillectomies, 5.8 and 13.2 days; inguinal hernioplasties, 20.8 and 51 days; appendectomies, 16.6 and 32 days (male); and hemorrhoidectomies, 20.6 and 36 days, respectively.

When broken down into decades, the numbers of days lost showed no significant differences among the various age groups.

Other investigators have reported that most of their civilian patients complained of increased fatigue for the first week after returning to full activity. The authors' survey did not reveal a high incidence of fatigue. Those with the highest incidence were the patients who had had tonsillectomies. Of them, nine per cent complained of fatigue.

The patients in the Air Force study returned to duty earlier than those reported in the civilian study, "and one wonders whether this earlier return to normal activity is a significant factor in the lower incidence of fatigue in the Air Force group," Drs. Wenger and Gustavson concluded.

* Wenger, D. S., and Gustavson, W. H.: Postoperative convalescent time. SURG., GYNEC. & OBST., **111**:87ff., (July) 1960.

SPEAKERS' BUREAU SCHEDULES

TELEVISION

KVTV—Sioux City, Iowa

(Please check with your newspaper for program time)

September 4 Rehabilitation of Strokes
September 11 Gallbladder Surgery
September 18 Nervous Breakdown
September 28 Hospital Emergency Care

ANTIBODY MECHANISM MAY CAUSE DISEASES

The theory that the antibody-producing mechanism in man can cause diseases is gaining support, and may be the key to a better understanding of rheumatoid arthritis and other disorders, according to an editorial in the August 13 issue of J.A.M.A. It cited accumulating evidence that abnormal antibody-producing cells can cause systemic lupus erythematosus, and said that discovery of the causes of other diseases such as rheumatoid arthritis, Addison's disease and chronic pancreatitis seems near.

The editors of J.A.M.A. referred to an editorial by Dr. William Dameshek, a professor of medicine at Tufts University, in the August issue of AMA ARCHIVES OF INTERNAL MEDICINE. He had said, ". . . there is sufficient evidence at hand to call SLE a complex autoimmune disorder with irregular involvement of various constituents of the blood and small blood vessels, thus resulting in a highly protean disorder.

"Involvement at the beginning may be limited to one tissue, one organ, or one blood-cell constituent, with progressively greater involvement as time goes on. Finally, there is a widespread generalized disease with death ordinarily due to severe renal disease."

Dr. Dameshek said the reasons for the development of groups of abnormal antibody-producing cells are obscure.

NOVEL METHOD FOR IDENTIFYING NEWBORN

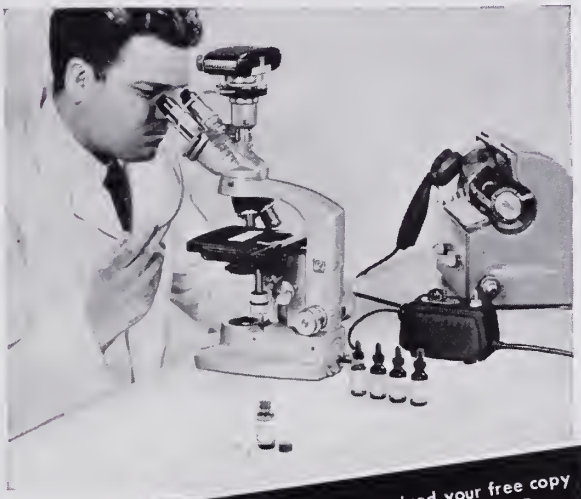
A new, apparently foolproof, method for the identification of the newborn and the prevention of possible baby mix-ups has been devised by physicians and a medical photographer at Cook County Hospital, Chicago.* The infant's ear is the key to the procedure. After an examination of many pictures of newborn babies, they noted that the ear remained constant, whereas the other features of the face changed. Responses to a questionnaire sent to plastic surgeons throughout the English-speaking world strengthened their feelings that the ear would be a good constant for identification.

A total of 206 sets of ears were photographed during the preliminary study, and an analysis of the data by obstetricians showed the following: "The ears of different sample babies are always unique; no members of the sample have been discovered to have ears identical in size, form or configuration. There is enough variation in ear forms of individual sample babies to distinguish *visually* the ears of one baby from those of another. The minute changes which take place in

* Fields, C., Falls, H. C., *et al.*: Ear of the newborn as an identification constant. OBST. & GYNEC., **16**:98 (July) 1960.

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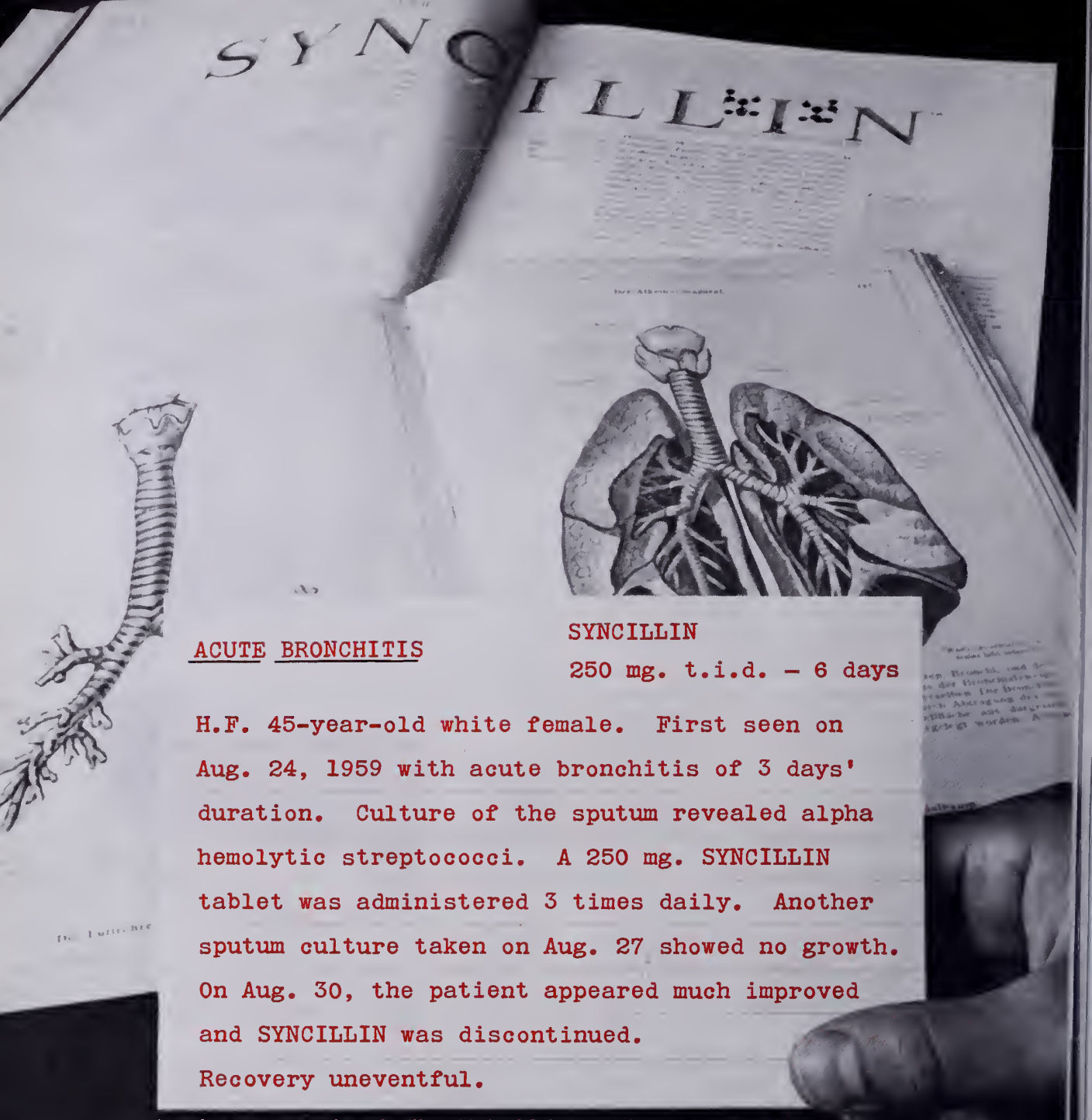
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the growing ear are so slight that the immutability of the series is not jeopardized."

The photorecord includes a photograph of the infant's ear; the mother's fingerprint (right index finger) and other specific data: hospital, name, date, doctor and sex. The pilot study was made possible through the development of a special photographic apparatus equipped with an opening designed to accommodate the ear of the child being photographed.

In conclusion the investigators said: "Alleged and actual mixing of babies is a calamity. . . . If a satisfactory system of identification, modeled after the system described above, can be introduced and established as an integral part of the delivery room and nursery complex of all hospitals, these unfortunate tragedies can be avoided."

THE MINNESOTA MEDICAL FOUNDATION

The Minnesota Medical Foundation, an organization of physicians, U. of M. alumni and citizens, has announced an expanded program of support for the U. of M. Medical School. It intends raising $62,500 from members and other donors to finance:

—Up to 40 scholarships of $500 each for deserving medical students

—A distinguished service professorship for a faculty member yet to be selected

—Expansion of the Medical School's official journal

—Research stipends for medical students during vacations and periods of elective medical education

—Establishment of a special basic research fund to support the work and ideas of young investigators at the Medical School.

The 1,600-member organization emerged from recommendations by a 1958 faculty committee that surveyed the present and future needs of the Medcial School. The Foundation recently received a $2,000 grant from the Minnesota State Medical Association with which to launch and administer a special emergency loan fund for medical students.

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THE MANAGEMENT OF RELAPSE IN TUBERCULOSIS

an abstract of an article by Robert V. Cohen, M.D., in PHILADELPHIA MEDICINE, January 15, 1960

Tuberculosis patients who have had chemotherapy in the past are more difficult to treat if relapse occurs than are those who were treated without drugs. Drugs combined with modified bed rest should be used in all cases. Effective first-treatment is the best defense against relapse.

The management of patients who relapse after treatment for tuberculosis without drugs should be handled exactly like first-treatment cases: with adequate rest, two drugs and—if indicated—surgery. If the patient is a responsible graduate of an old-time tuberculosis hospital, it may not be necessary to keep him in a hospital for the entire duration of drug therapy. A preliminary hospital work-up is needed for complete evaluation. This should include radiologic and bronchoscopic study, pulmonary function tests, bacterial drug susceptibility determinations, and careful observation for untoward drug reactions. After this, if the home is adequate and if the patient is sufficiently intelligent and reliable, he can be treated on an outpatient basis. This does NOT mean that he can continue to work. To give a patient a bottle of pills and tell him to come back in four to six months, is not tuberculosis treatment.

Patients with much fibrosis or those who have had pneumothorax or thoracoplasty may have greatly reduced pulmonary function. Surgical measures should be undertaken only after careful assessment of pulmonary function. Older patients who improve and turn negative on chemotherapy should be maintained on drugs for a long, long time. The more extensive the original lesion or the older the patient, the longer the drug regimen. Drugs can be taken "For Life" in the treatment of tuberculosis, just as in the treatment of diabetes, pernicious anemia, epilepsy and other diseases.

RELAPSE AFTER CHEMOTHERAPY

By far the larger and more difficult group of patients seen in relapse today are those who have had chemotherapy in the past. The great majority of these unfortunate situations arise because someone has broken one of the three fundamental commandments of chemotherapy:

I. Thou shalt not stop first-treatment drugs too soon.

II. Thou shalt not interrupt treatment.

III. Thou shalt not use up thy best drugs in the first round.

A patient who has active tuberculosis after "ad-

Reprinted from ABSTRACTS, issued by the National Tuberculosis Association, Vol. XXXIII, No. 7, September, 1960.

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equate" drug treatment is in a very tough spot indeed!

The initial work-up should include, in addition to the items mentioned above, a meticulous history of drug treatment, dosage and duration. Tests of bacterial susceptibility to drugs are mandatory. By and large, test-tube resistance to streptomycin parallels clinical resistance. Giving more streptomycin in such situations can cause toxic reactions, but do no good. In first-treatment cases, resistance to isoniazid in the test tube does *not* always parallel the clinical situation; if the drug is continued, clinical improvement may be anticipated. This does not apply to patients who relapse while on treatment or after treatment. These patients usually show both test-tube and clinical resistance. If the patient in relapse has not had one of the major drugs (isoniazid or streptomycin), he certainly should get it, in combination with PAS or a PAS substitute. Usually, unfortunately, the patient has had isoniazid-PAS-streptomycin prior to relapse. One reason why many patients use up their two best drugs during first treatment is the improper evaluation and handling of drug reactions. Reactions can be classified as: (a) toxic, such as eighth nerve damage due to streptomycin or neuropathy due to isoniazid, (b) intolerance, gastrointestinal symptoms due to PAS, (c) hypersensitivity, or true allergy: fever, adenitis, rashes, changes in blood, purpura, hepatitis, shock, even death.

DRUG REACTIONS

Every drug reaction should be analyzed and classified, as each type requires different handling.

Toxic reactions: reduce dose, change form, give antidote if available (B6 for isoniazid).

Intolerance: reduce dose, change form (KPAS or resins for sodium PAS), give counteracting medicine (antacids, etc.).

Hypersensitivity: STOP DRUG. Desensitize. If the patient has used up his first-team drugs, the second- and third-team drugs are left. These, alas, are not too good. Pyrazinamide is a potent drug. It is best when given in combination with isoniazid, which is already used up. It is potentially toxic to the liver (3.5 to 10 per cent in various studies), and hence most physicians prefer to give it for a relatively short time—about three months—with frequent tests of liver function. If any surgery is planned, pyrazinamide is an excellent drug to "cover" the period of surgery and convalescence.

Cycloserine is not a very potent drug; used alone to treat a patient in drug-resistant relapse, it is of little value. Viomycin and terramycin have some effect, but are not very potent. Kannamycin has proved more toxic than useful. Hinconstarch, streptovaricin and the hydrazones of isoniazid all seem to work better in reports from abroad than in patients in relapse.

Corticosteroid drugs, which can be very helpful in some selected, very sick, first treatment cases, are dangerous and should be avoided in re-



lapse patients. If these agents are used without an effective "umbrella" of antituberculosis drugs, they can cause serious spread of the tuberculosis.

We must not forget the value of old-fashioned bed rest. This unspectacular modality has helped untold thousands of patients in the past hundred years; in many cases it was the only treatment used. Bed rest, not all day but 18 to 20 hours a day, can reduce toxicity, improve resistance and frequently allow a relapsed patient to "cool off" sufficiently, either to overcome his disease or to tolerate surgery.

Surgery does not have to be resection. There is still a place for thoracoplasty in patients with localized upper lobe cavitation, who are poor risks for resection. Plombage is a less effective, but also less drastic, procedure and may be used as a temporary expedient.

Any surgical procedure is more dangerous when performed on a patient who is excreting drug-resistant tubercle bacilli. It takes sound and mature medical judgment to decide whether to take a calculated risk or to leave a bad situation alone.

To sum up the treatment of relapse: There is no simple formula. Practically all patients should be in a hospital. A first-line drug, not used before, should be given with either PAS or a comparable drug. Isoniazid may be given, hopefully, but may do no good. Only occasionally will very high doses of isoniazid (with 10 per cent B6) prove helpful after regular doses have become ineffective. The best combination of second- and third-team drugs should be used. Modified bed rest is an extremely valuable treatment. Collapse or resectional surgery is more hazardous in the presence of drug-resistant tubercle bacilli, but can be carried out in selected cases. The best management of relapse is to try to prevent it by carrying out effective first treatment.

TEXT ON CONGESTIVE HEART FAILURE

A new paper-bound, 120-page book SYMPOSIUM ON CONGESTIVE HEART FAILURE, edited by Hermann L. Blumgart, M.D., is now available for $2 per copy at the offices of the Iowa Heart Association, 2100 Grand Avenue, Des Moines 12.

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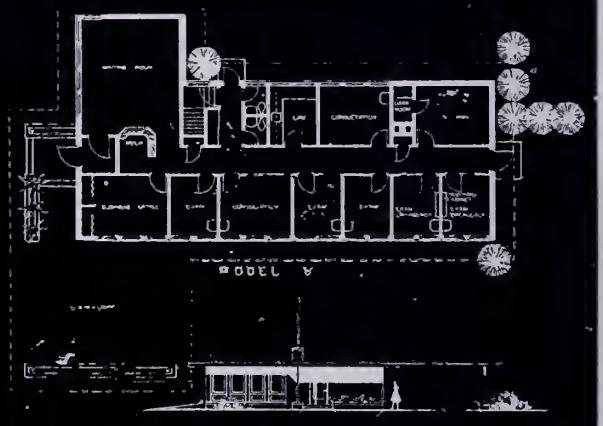
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Following are the guest speakers and their topics:

Adolph B. Loveman, M.D., associate professor of dermatology at the University of Louisville
"Mucous Membrane Lesions of Interest to the GP"
"Cutaneous Disorders of the Female Genitalia"
"Diagnosis of Cutaneous Disorders of Face and Scalp"

W. Paul Havens, Jr., M.D., professor of clinical microbiology and medicine, Jefferson Medical College
"Current Problems in Viral Hepatitis"
"Differential Diagnosis and Treatment of Hepatic Disease"
"Viral Infections of the Respiratory Tract"
"Liver Disease and Antibody Formation"

Willem J. Kolff, M.D., head of the Department of Artificial Organs at the Cleveland Clinic
"Surgical Approach to Coronary Artery Disease and Replacement of Heart Valves With Artificial Valves"
"Treatment of Uremia, Especially With Artificial Kidney"
"Intrathoracic Artificial Heart"
"Treatment of Renal Disease"

Herbert C. Modlin, M.D., senior psychiatrist, Menninger Foundation
"Traumatic Neurosis"
"Sexual Psychopathy"
"Psychological Reactons to Head Injury"
"Psycho-Socio-Somatic Instability"

John W. Huffman, M.D., associate professor of obstetrics and gynecology, Northwestern University
"Prophylaxis of Postoperative Phlebothrombotic Disease"
"Gynecologic Problems in Childhood"
"Dyspareunia as a Symptom of Organic Disease"
"The Management of Stress Incontinence"

Dana M. Street, M.D., professor of orthopedic surgery at the University of Arkansas
"Fractures About the Knee Joint"
"Surgical Treatment of the Low Back"
"Fractures of the Upper Extremity"
"Common Fractures in Childhood"

Robert E. Priest, M.D., clinical professor of otolaryngology, University of Minnesota
"Tracheotomy: Indications and Technic"
"The Ear in General Practice"
"Treatment of Ear, Nose and Throat Diseases"

Joseph D. Boggs, M.D., professor of pathology, Northwestern University
"Tumors in Childhood"
"The Use of Blood and Blood Products in Pediatrics"
"Fluid and Electrolyte Therapy in Children"

John A. Evans, M.D., professor of radiology, Cornell University
"Roentgen Diagnosis of Renal Masses"
"Some Painful Lesions of the Spine in Children"
"Roentgen Aids in Diagnosis of Neoplasm of the Liver and Extrahepatic Duct System"

Carleton Matthewson, Jr., M.D., professor of surgery, Stanford University
"The Problem of Peptic Esophagitis"
"Management of Benign Surgical Lesions of the Esophagus"
"Diverticulitis of the Colon and Its Complications"
"Present Concepts of the Management of Duodenal Ulcer"

William P. Williamson, M.D., head of the Section of Neurological Surgery, University of Kansas
"Carotid Arteriography in the Management of Intracranial Trauma"
"Big Heads, Little Heads and Queer Heads"
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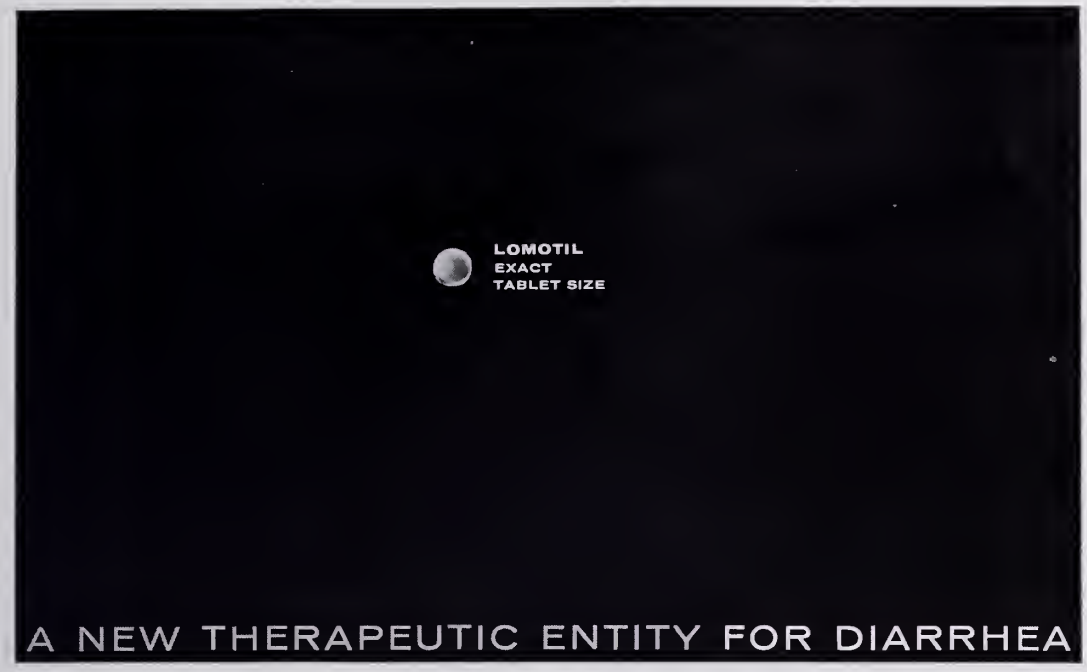
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(1) Abraham, W., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, Williams & Wilkins Company, 1956, p. 132. (2) Crawley, J. W.: M. Clin. North America 42:317 *(March) 1958. (3) Bray, P. F.:* Pediatrics 23:151, *1959.*

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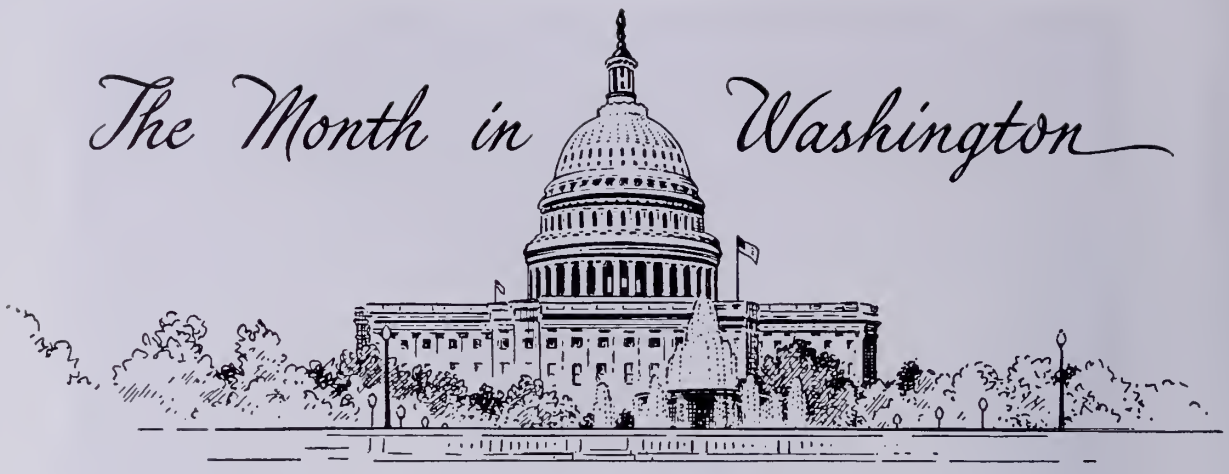
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The Month in Washington



Washington, D. C.—The federal government is offering states liberal matching funds to provide health care for needy and near-needy persons 65 years of age and older.

The program, which Congress approved in the bob-tailed post-convention session, was supported by the American Medical Association and allied health groups.

Congressional approval of the federal-state program marked a victory for the medical profession and a defeat for Democratic Presidential Nominee John F. Kennedy, the AFL-CIO and other advocates of the Social Security approach to the problem.

In a key vote on the issue, the Senate rejected by a 51-44 vote a Kennedy proposal that would have provided hospitalization and medical care for the aged under the Social Security system. The Kennedy plan would have required an increase in payroll taxes.

Republicans and Southern Democrats joined in the Senate to defeat the Social Security approach which was opposed vigorously by the medical profession.

After voting down the Kennedy plan and a separate proposal of the Eisenhower Administration, the Senate passed a modified version of a House-approved program. The modifications, sponsored by Sen. Robert S. Kerr (D., Okla.) and others, provided for increases in the percentage of federal matching funds and for administrative changes designed to facilitate state participation.

Under the legislation as signed into law by President Eisenhower, (1) substantial increases are authorized in federal grants to states to help with health care expenses of the 2.4 million persons on old age assistance rolls, and (2) federal matching funds are offered the states to finance a new program of health care for an estimated 10 million aged persons who are not on relief but whose incomes may be inadequate to take care of all their health costs.

Start of the program was authorized for Oct. 1 for those states where new state legislation is not required.

Administration of the program rests entirely with the states, subject to federal approval in broad terms. It is up to each individual state whether it participates. Eligibility standards for beneficiaries and what health care services are provided are matters for the states to decide.

If a state so chooses, it can take care of all the health needs of an eligible beneficiary. The law authorized inpatient hospital services; skilled nursing home services; physicians' services; outpatient or clinic services; home care services; private duty nursing services; physical therapy and related services; dental services; laboratory and x-ray services; prescribed drugs, eyeglasses, dentures and prosthetic devices; diagnostic screening and preventive services; and any other medical care or remedial care recognized under state law.

For medical expenses of persons on old age assistance rolls, the federal government will contribute 50 to 80 per cent—with states having low per capita incomes getting the larger percentages of federal aid—of an amount equal to $12 multiplied by the number of old age assistance recipients in a particular state.

The matching formula will be the same for financing the health care of the near-needy, but there is no $12 limitation figure.

Health, Education and Welfare officials estimated first-year costs of the program at $262 million—$202 million federal and $60 million state. Annual costs are estimated to rise by the end of the fifth year to $340 million federal and $180 million state. However, these estimates admittedly are no more than educated guesstimates because so much depends upon state action.

It was estimated that maximum participation



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New Society Members are eligible to apply for this special low-cost protection. Also, all members who did not enroll originally may still make application for insurance.

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and a state contribution of $57,000 would bring Iowa $3.2 million in federal matching funds in the first year of the program.

The medical-care-for-the-aged legislation was included in an omnibus measure titled "Social Security Amendments of 1960." It also eliminated the age-50 requirement for eligibility for disability insurance benefits.

The Senate knocked out of the House bill a provision that would have brought physicians under Social Security coverage.

On other legislation of interest to the medical profession:

Congress passed bills authorizing expenditure of $10 million of counterpart funds abroad to stimulate international research; authorizing up to 15 per cent of National Institutes of Health research grants for non-governmental medical research; directing a broad study of air pollution problems; requiring informative labeling on packages of hazardous substances for household use; and giving the government power to establish a tolerance on the amount of color additives that may be used in various products.

The Senate failed to act upon House-approved legislation that would have given physicians and other self-employed persons a tax break on income put into private pension plans.

PREVALENCE OF ULCERS IS INCREASING

More than 2,400,000 Americans have ulcers, and of that number nearly three times as many are men as are women, according to a study that the Health Insurance Institute has made of data from the U. S. National Health Survey. Furthermore, there are indications, the report said, that ulcers are four times as common among Americans now as they were in the 1930's.

A National Health Survey in 1935-1936 showed that less than three out of every 1,000 persons had an ulcer, but the latest survey, covering the 1957-1959 period, disclosed that 14 out of every 1,000 persons in the civilian population were so afflicted. However, this apparent quadrupling of the rate has been attributed in part to more accurate methods of diagnosis through wider use of x-ray equipment.

Other statistics, however, strengthen the impression that the prevalence of ulcers has increased alarmingly. Over a 20-year span, the rate of hospital admissions for ulcers has grown from 0.4 per 1,000 persons per year to 1.7 per 1,000 per year. Three out of every 10 such patients had their ulcers treated surgically.

The greatest incidence of ulcers in men was to be found in the 35-44 year age group, of whom 42.5 of every 1,000 had ulcers.

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PAMPHLETS ON NURSING HOME OPERATION

"Selected Articles on Nursing Homes" (287 pp.) is a compilation of material on different facets of nursing home operation. Coverage of the subject is comprehensive, and ranges from reports on a nationwide survey of nursing homes, through articles on medical, nursing, rehabilitative and administrative policies and standards, to financing and costs of care. A directory of state nursing home licensing agencies and a list of selected additional references is appended. (Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. $1.00.)

Another publication on this subject is "Private Nursing Homes; Their Role in the Care of the Aged" (20 pp.). This pamphlet contains general advice to any family or individual seeking a suitable nursing home. It points out the essentials of a good nursing home, and discusses how the need for improved facilities of this type has arisen. (Public Affairs Pamphlet No. 298. Public Affairs Committee, 22 East 38th Street, New York City 16. 25 cents.)

The new Catholic Hospital Association publication on the care of the aged is now available, entitled "The Administration of Long-Term Care Facilities." In it, 16 recognized authorities in the field of geriatric care present material relating to the various aspects of care for the aged in an institutional setting. The book is a collection of papers originally presented at an institute held in St. Cloud, Minnesota, attended by representatives of nursing homes in 15 states. (Publications Department, Catholic Hospital Association, 1438 South Grand Boulevard, St. Louis 4. $1.50.)

IOWA HEART ASSOCIATION GRANTS

The Iowa Heart Association is now accepting applications for 1961-1962 fellowships and grants-in-aid in the cardiovascular field, from any recognized research or educational institution in Iowa. These grants, of up to $5,000 each, can be for support of investigative work in both clinical and basic science areas. Applications will be reviewed by the Research Committee of the Iowa Heart Association, and awards will be made on the basis of merit.

The deadline for fellowship applications is December 1, 1960, and for grants-in-aid, March 1, 1961. For application blanks and further information, address the executive director, Iowa Heart Association, 2100 Grand Avenue, Des Moines 12.

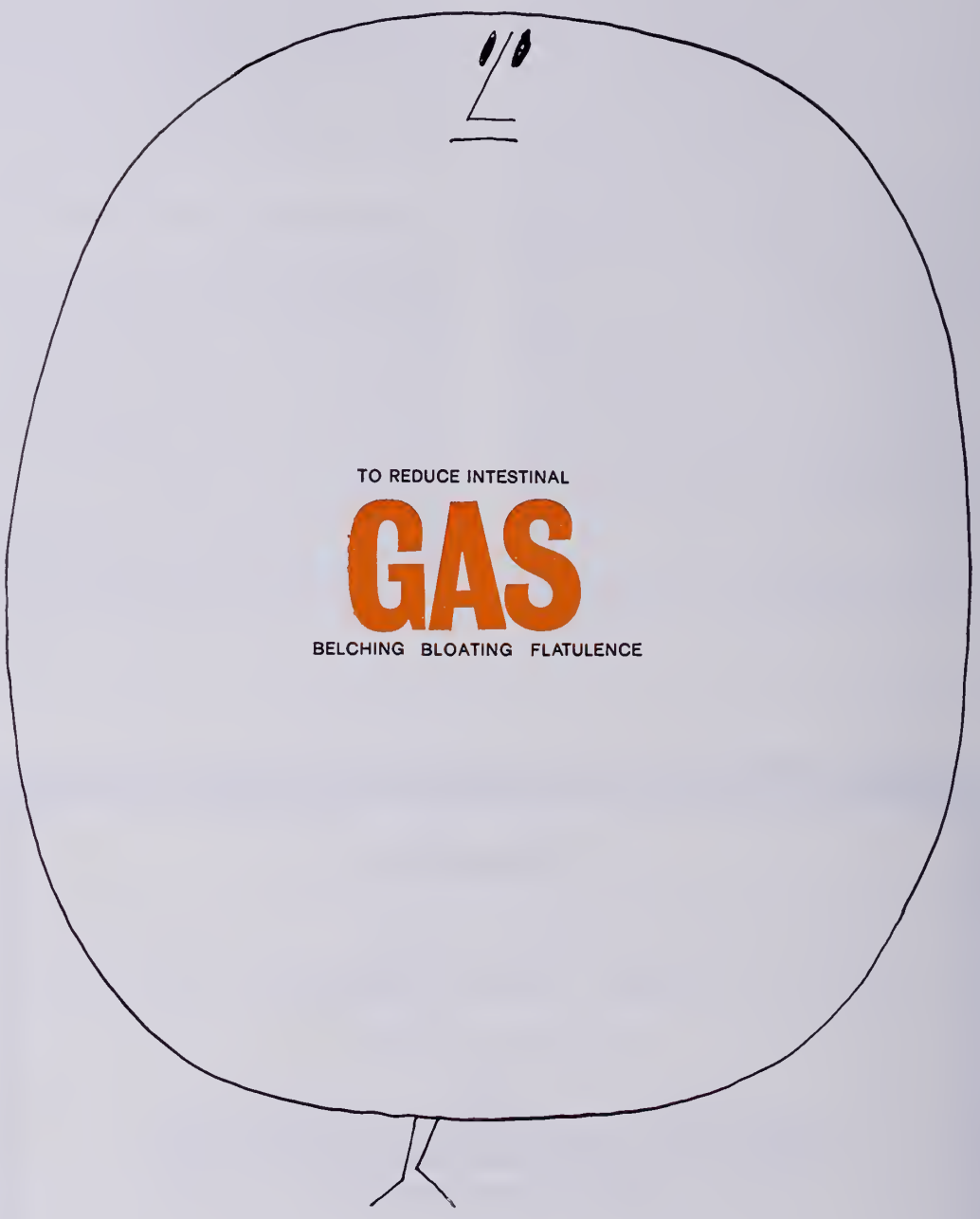
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Personals



The new modern building housing the medical offices of **Dr. Albin C. Bergstrom** and **Dr. John W. Barnes,** of Missouri Valley, has been completed. The 11-room building is situated across the street from Community Memorial Hospital.

Dr. W. E. Owen, of St. Ansgar, has been certified as a fellow of the American College of Anesthesiology. He completed his written examinations at Iowa City and his oral exams at Atlantic City.

Titus C. Evans, Ph.D., of Iowa City, took office as president of the Society of Nuclear Medicine recently at the organization's seventh annual meeting, in Estes Park, Colorado. Approximately 500 physicians and other scientists from the U. S. and other countries were in attendance.

An open house was held for **Dr. Richard A. Wood** at Peterson, Iowa, on August 14. Dr. Wood, a native of Des Moines and a graduate of SUI, is establishing practice in Peterson as a result of an arrangement with the Peterson Lions Club whereby the citizens of Peterson contributed toward Dr. Wood's medical education and remodelled a building under his direction for use as a clinic with the understanding that he would begin practice there. He graduated from SUI in 1959 and took his internship at Broadlawns-Polk County Hospital in Des Moines, finishing in July of this year.

Dr. A. P. Smith, of Jewell, took over the practice and office of the late **Dr. Helge Borre** at Hubbard, on August 22. Dr. Smith planned to move to Hubbard as soon as suitable housing was available.

Dr. G. A. Jenkins, of Albia, a Life Member of the Iowa State Medical Society, underwent major surgery August 4 at University Hospitals, Iowa City. He is convalescing at the home of his son, **Dr. Dewayne Jenkins,** in Burlington.

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Dr. Byrnjulf Strandberg, a Danish doctor and one of the leaders among European physicians encouraging cultural exchange in various fields of medical science, recently spoke before orthopedic and rehabilitation staff members at SUI. As a representative of the Danish department of health and consultant for the World Health Organization (a United Nations health agency), Doctor Strandberg is visiting some 80 rehabilitation centers in America to gather information for the formulation of an international postgraduate course in rehabilitation in Denmark. While in Iowa City, he spoke on the subjects "The Oil Paralysis in Morocco, Africa" and "Rheumatoid Arthritis as a Single Cancer Symptom."

Dr. Kurt Jaenicke, 77, of Clinton, was injured on August 7 in an automobile accident at Oregon, Illinois, when his car went out of control and struck a tree. He sustained fractures of both arms and possible internal injuries. A passenger in his car was killed instantly.

Dr. John H. Moling, who has been in pediatric practice in Winchester, Virginia, now is associated with **Dr. F. Benjamin Merritt**, of Dubuque. Dr. Moling is a graduate of the University of Virginia School of Medicine, and served his internship and residency at St. Luke's Hospital in Cleveland. He was certified by the American Board of Pediatrics in 1959.

Dr. S. Rodmond Smith, of Red Oak, was named chairman of the Montgomery County Chapter of the American Red Cross at the annual dinner and meeting of the board of directors of the chapter on July 25 at the Hotel Johnson in Red Oak.

Dr. George Uhl, a graduate of the SUI College of Medicine, has joined the Osage Medical Group after finishing his internship at Bethesda Hospital in St. Paul, Minnesota.

Dr. Thomas C. Graham, of Iowa Falls, has been designated the Federal Aviation Agency medical examiner for pilots in his area.

Dr. Gilbert Roller, a native of Des Moines and a 1959 graduate of the SUI College of Medicine, is now associated with **Dr. F. J. Swift, Jr.**, in Maquoketa. Dr. Roller interned at the U. S. Naval Hospital in San Diego.

Dr. Vincent Adams is to begin practice shortly in Rockwell, a town that has had no M.D. since **Dr. James B. Campbell** moved from there to Davenport two or three months ago. Dr. Adams received his bachelor of science degree from St. Ambrose College, Davenport, and then took two years of graduate work at the University of Iowa. He taught school at North Platte, Nebraska, for three years and then resumed medical studies at Creighton University School of Medicine. From 1943 to 1946 he served with the Navy. He interned at St. Joseph's Hospital in Omaha. He occupies the office that belonged, until a couple of years ago, to **Dr. E. Fleming**, who left to take a residency.

Dr. Jean Vacher, professor of legal and occupational medicine at the School of Medicine in Tours, France, visited SUI in August as a participant in the foreign specialist program of the Bureau of Educational and Cultural Affairs of the U. S. Department of State. During his stay, Dr. Vacher toured University of Iowa laboratories and discussed various aspects of legal and medical problems which are peculiar to a rural population. Besides making field trips to farms in the Grinnell area and to Iowa State University at Ames, he was shown the Steele Memorial Clinic at Belmond as an example of the excellent medical facilities to be found in small towns.

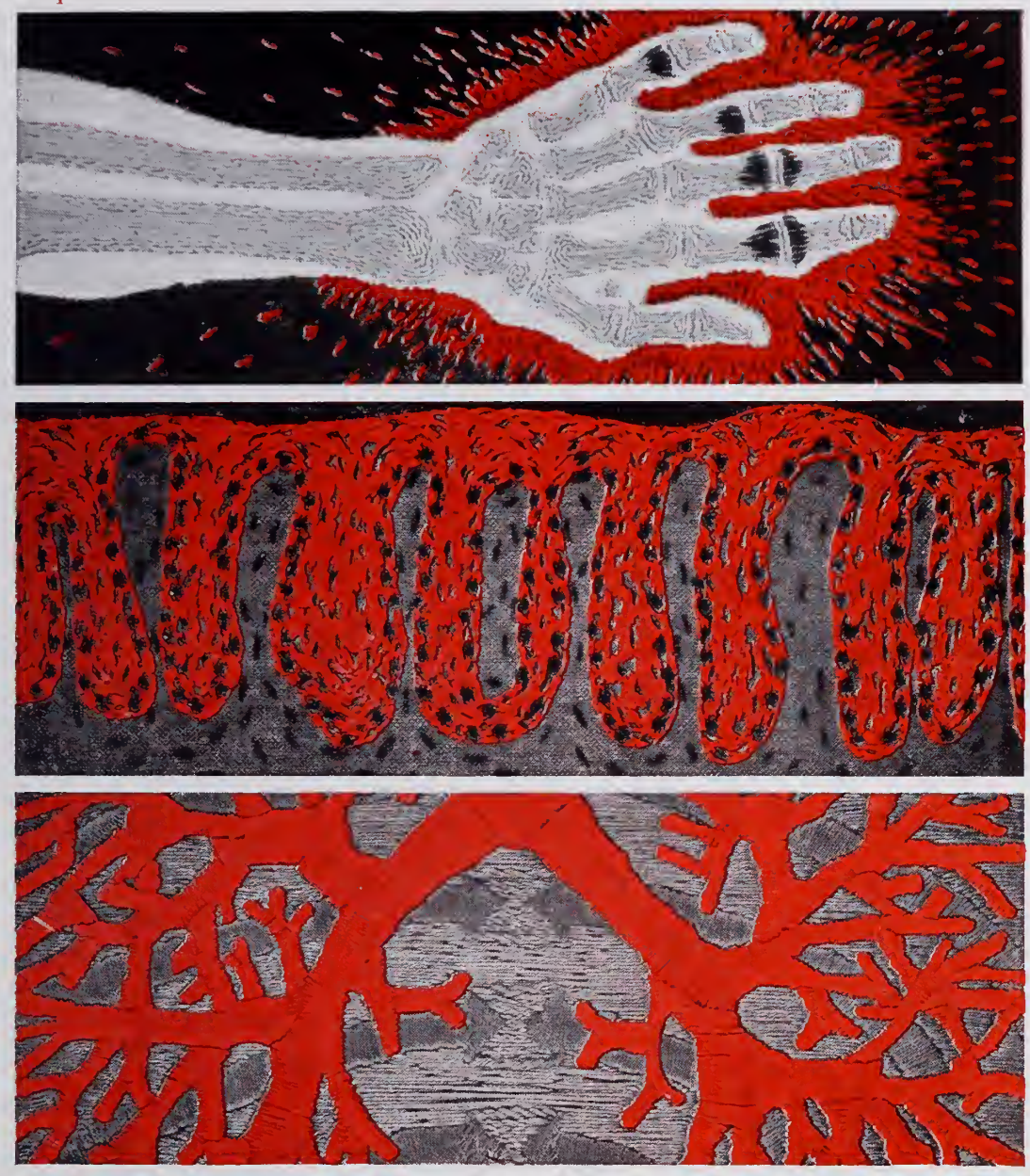
Dr. Paul F. Brown, of Maquoketa, was recently elected to the city council there, filling an unexpired term of a member who had moved away. Dr. Brown will represent the west half of the city.

Dr. E. V. Andrew, of Maquoketa, has moved to Iowa City where he has accepted a position as director of admissions at the Veterans Hospital.

Dr. Robert Sprowell, a dermatologist, has joined the McFarland Clinic at Ames. He is a native of Wyoming, and a graduate of the George Washington University School of Medicine. In 1952-1953 he served his internship at St. Luke's Hospital, Fargo, North Dakota. He began residency training in the Department of Dermatology at the State University of Iowa Hospitals, Iowa City, in 1955 and 1956, and served at the U. S. Navy Hospital, Corpus Christi, Texas from 1956 to 1958. He completed his residency at Iowa City this month.

A new doctor has joined the partnership of **Dr. R. C. Graham** and **Dr. R. W. Dunlay**, in Iowa Falls. He is **Dr. Herbert E. Gude**, of Lafayette, Indiana. Dr. Gude received his medical degree

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from Creighton University and had taken over another doctor's practice in Lafayette for a short time before coming to Iowa Falls.

The city council of Iowa Falls voted 4 to 0 in favor of fluoridation after receiving a petition backed by the city's dentists, doctors and other community leaders. The petition bore the names of about 720 persons. Final adoption of the ordinance will clear the way for completing the installation of fluoridating equipment which is now on hand.

In the week of August 22-27 three diphtheria patients, an infant and two adults, were discovered in Trailer City and the Manawa area of Pottawattamie County. **Dr. Ralph Heeren,** of the Iowa Department of Health, declared that although the situation demanded immediate concern, it wasn't cause for alarm. After a meeting with Dr. Heeren, the Pottawattamie County Board of Health issued a five-point warning directed to residents of Manawa and Trailer City. (1) All persons should check with their doctors and bring immunizations up to date. (2) Report colds or sore throats immediately to your doctor. (3) Don't send children with colds or sore throats to school. (4) Contacts of known cases must stay away from school or work until 48 hours after preventive treatment. (5) In general, visiting should be reduced to a minimum for the next two weeks.

Although there is at present no Iowa statute to prevent anyone from practicing hypnotism, **Dr. Edmund G. Zimmerer,** state health commissioner, believes its use should be limited to physicians and dentists. He thinks entertainers, among others, should be barred from using it. **Dr. Paul Kersten,** chairman of the Iowa State Medical Society's Mental Health Committee, agrees that "hypnotism is not a toy and that one of the big dangers in using hypnotism is the personality decomposition that can take place. It is not for the ordinary layman who has no background in medicine or psychiatry." Dr. Kersten also feels that before using hypnosis every physician and dentist should make complete evaluation of the physical and psychiatric status of the person on whom the technique is to be used. Dr. Zimmerer has no personal plans to seek legislation to control the use of hypnotism, but if such legislation were introduced he would support it.

Dr. Leonard W. Larson, president-elect of the AMA, is a former Northwood, Iowa, physician. As

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in cardiac disease[23,28,29,36,41]
in dermatitis[24,39]
in peptic ulcer[8,21,38]
in neuroses & psychiatric disorders[25,26]
in diabetes mellitus[31,32,33,36]
in alcoholism[9,11,35,37,38]
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1-41 a list of the above references will be supplied on request.

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a young doctor fresh out of medical school, he hung out his shingle there in 1923 in partnership with the late **Dr. L. G. Hewitt.** As the son of a pharmacist, Dr. Larson at first seemed headed for a career in pharmacy but his college roommate at the University of Minnesota, urged him to go into medicine. In his last two years at the University of Minnesota, he placed considerable emphasis on bacteriology and pathology and after graduation spent less than a year in general practice before returning to laboratory medicine and pathology, his present specialty.

But on the medical controversy of whether a doctor should spend some time as a GP first before going into a specialty, Dr. Larson says, "I think that any physician who has some general practice cannot help but be better equipped for any specialty." Today he and four partners operate a 30-doctor clinic in Bismarck, North Dakota, and he is also pathologist for Bismarck's two 200-bed hospitals. He is holder of a long list of medical offices and awards, including a gold medal from the American Cancer Society and a Certificate of Highest Merit from the American Society of Clinical Pathologists.

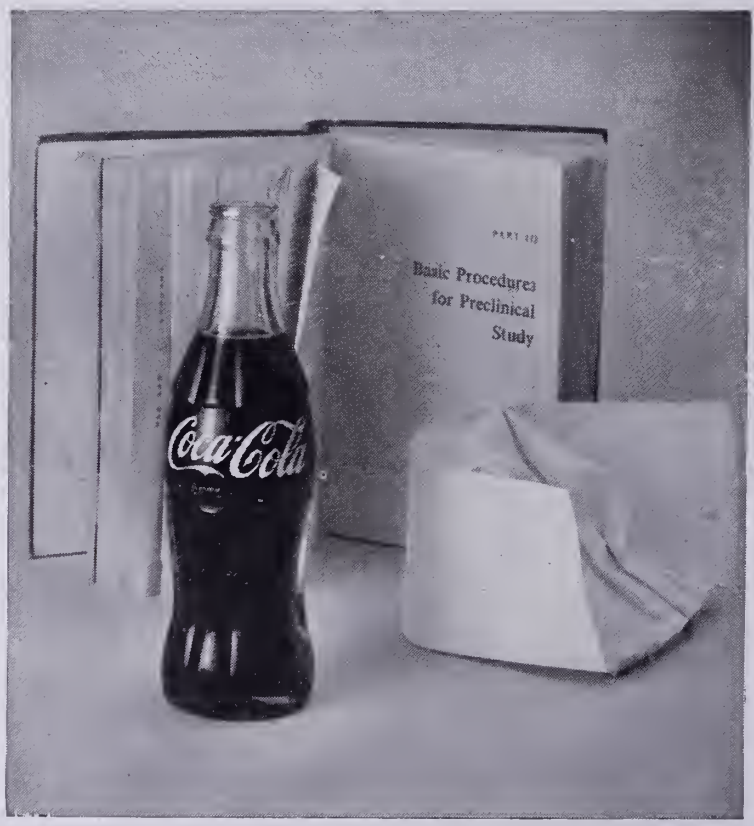
Dr. C. W. Maplethorpe, Sr., of Toledo, was honored at a dinner, August 12, at Dick's Restaurant, and a program followed at the Community Hall in commemoration of his 50 years as a doctor in the community, and his enthusiastic support of community projects. A rising ovation for the doctor terminated the program.

At present Dr. Maplethorpe is president of the Tama County Medical Society and a staff member of St. Thomas and Evangelical hospitals in Marshalltown. He holds charter memberships in the Toledo commercial club and Lions club, is a member of the Masonic Lodge and served six years on the school board.

Dr. J. G. Clapsaddle, of Burt, is leaving for Florida the latter part of October and plans to stay until May, 1961.

The Scott County Medical Society will meet October 4 at the Outing Club in Davenport. The program committee has arranged for presentations which will acquaint the members of the group with the many problems involved in the operation of the Scott County Medical Society Blood Bank.

At the September meeting of the Scott County Medical Society, **Dr. George Morrissey,** of Daven-



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the unyielding hours,
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often puts things
into manageable order.

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port, presented a historical paper entitled "The Servetus Affair."

Dr. Robert Updegraff, of Des Moines, recently completed a two-week course in ear surgery at Manhattan Eye and Ear Hospital, New York under **Dr. Richard J. Bellucci.**

In recent weeks **Dr. Dennis H. Kelly, Jr.**, an internist, and **Dr. Milton Mark**, and **Dr. Michael Hirsch**, obstetricians, have relocated their offices in new units of Doctors' Park, in Des Moines.

One Des Moines physician has been using the following imprint on his statements and prescription blanks: You are reminded that influenza immunization should be started in September.

Dr. Solomon Greenhill, a Des Moines dermatologist, returned to practice after Labor Day following a successful recuperation from a coronary.

According to its secretary, **Dr. Atlee B. Hendricks**, the Scott County Medical Society, supporting recommendations from the AMA, has mailed letters to all of its members urging two simple safety rules to follow when responding to night calls. The rules are (1) to apply for a gun permit and carry a weapon, if it seems advisable, and (2) to call for a police escort if a phone call for aid seems even the slightest bit suspicious, or in any case of emergency.

Dr. Lawrence J. Grahek, a general practitioner and surgeon, joined the Mercy Hospital Clinic at Oskaloosa on September 1. He is graduate of Creighton University and served his internship at the Creighton University Hospitals. He enrolled in the Army Medical Corps in 1957, serving one year in Korea with the 48th Mobile Surgical Hospital and one year at the Erwin Army Hospital, Fort Riley, Kansas. Upon completion of his military service Dr. Grahek served a year's residency in general surgery at Omaha Veterans Administration Hospital before joining the Mercy Hospital staff.

A farewell "potluck" was given **Dr. and Mrs. H. D. Oggel**, on Tuesday evening, September 6 at Maurice, Iowa. The couple left Maurice the latter part of September to make their home with a son in Waterloo. Dr. Oggel, a Life Member of the Iowa State Medical Society, retired from active practice six years ago after nearly 60 years in Maurice.

ANNUAL CLINICAL CONFERENCE

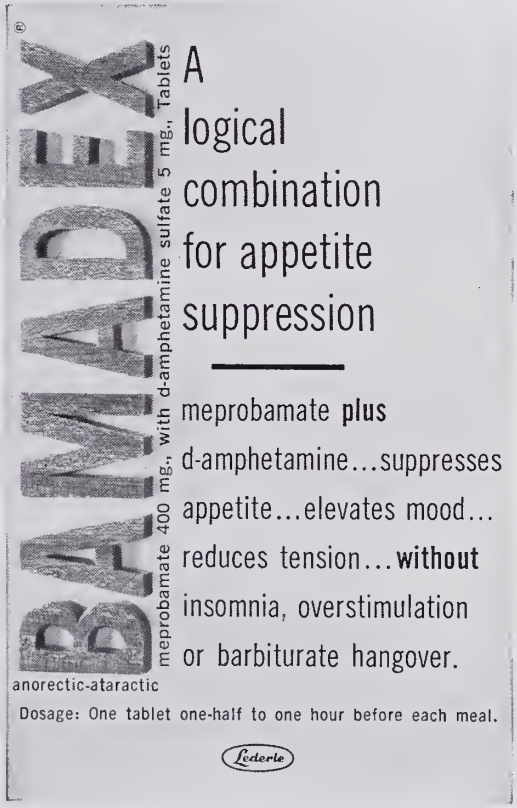
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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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The Black Hawk County Medical Society will meet October 18 at the Elk's Club, Waterloo. The social hour will begin at 6:30 p.m. and the dinner at 7:00 p.m. The program will consist of a business meeting.

The Iowa Academy of Surgery held a business meeting and scientific program September 9-10 at The New Inn, Lake Okoboji. The following papers were given at the meeting. "Carcinoma of Colon: Ten Year Results in Unselected Cases," by **Dr. Paul J. Laube,** of Dubuque; "Ectopic Pregnancy With Concurrent Intra-Uterine Pregnancy," by **Dr. J. Lawrence Smith,** Iowa Falls; "A Technique in Repair of Diaphragmatic Hernia," by **Dr. James W. Agnew,** Davenport; "Exchange Transfusion—A Surgical Procedure," by **Dr. Paul C. Cunnick,** Davenport; "Ano-Rectal Pathology in 1,400 Sigmoidoscopic Examinations," by **Dr. J. E. Christopherson,** Mason City; "Tracheotomy in Trauma," by **Dr. Philip J. Monnig,** Sioux City; "Differences Between Childhood and Adult Thyroid Carcinoma," by **Dr. J. A. Buckwalter,** Iowa City; "Cytological Studies Upon Perfused Surgical Specimens," by **Dr. Lyle Freimark,** Iowa City; "The Surgical Treatment of Dupuytren's Contracture," by **Dr. R. L. Lawton,** Iowa City; and "A Rare Combination of Breast Lesions: Cystosarcoma Phylloides and Carcinoma," by **Dr. Merle J. Brown,** Davenport.

Drs. Gardner D. Phelps and **Thomas F. Thornton,** of Waterloo, are among a group of individual contributors to AMEF who are to receive 1959 "Citations" from the organization. The "Citation" is the AMEF's new award given to county medical societies where 100 per cent of the membership have contributed and to generous individual contributors over the years.

As of June 30, 1960, the receipts of the Foundation were 132 per cent above those through June 30, 1959—a total of $295,302, as compared to $126,912 received in a roughly comparable period during the previous year. The 1959 figure includes one extra month because the ending of the fiscal year was changed to January 31.

Dr. Marian Lahmann Barnes opened her medical offices July 1 in Cedar Rapids. She is a 1959 graduate of SUI and has been interning the past year at Mercy Hospital, Cedar Rapids.

Dr. Stephan Fox, an orthopedic surgeon at Ottumwa, is an announced candidate for the Ottumwa community school district board of education.

In figures released by the Public Health Service late in August, heart disease among middle-aged

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men in the Waterloo area caused a death rate of 481 persons in every 100,000 from 1949-51. Comparatively, Sioux City's death rate from heart disease was 626 persons per 100,000 and Cedar Rapids' rate was approximately the same as that for Waterloo. The authors of the study from which these figures are taken, cited its value in pin-pointing, for the first time, the specific metropolitan areas where the death rates from heart illness are extremely high or relatively low. These areas can be thought of as "natural laboratories," they said. In general, where an area's rate was high from heart disease—the country's number one killer—the total death rate was found to be correspondingly high. For this reason, the authors believe that the variation in coronary death rates in the tested areas reflects real geographic differences in heart disease mortality. The lowest heart disease death rate was recorded in Lincoln, Nebraska, and the highest in Savannah, Georgia.

Dr. J. H. Chittum, 93, marked 61 years in the practice of medicine at Wapello on Thursday, September 1. He is still quite active and goes to the office daily. Dr. Chittum was chosen ISMS General Practitioner of the Year in 1954.

Clarence A. Morrill, of Foster Center, Rhode Island, has been appointed executive director of the Iowa Heart Association. He will resign his present position as executive director of the Rhode Island Division of the American Cancer Society and assume his new post on or shortly before October 1. Mr. Morrill succeeds **John B. Hermann,** who has resigned to accept a position as general consultant for the American Heart Association.



Clarence A. Morrill

Mr. Morrill, a former clergyman, has been executive director of the Montana Division of the American Cancer Society and the Community Memorial Hospital of Missoula, Montana. He is past president of the Long Island and Staten Island Hospital Association and of the Montana Planning Council.

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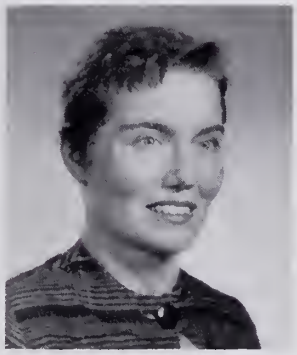
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Dr. Jeanne Jaggard Jaffe, a 1960 graduate of the SUI College of Medicine, has been cited for her high scholastic record by the American Medical Women's Association, Inc. Dr. Jaffe, who is now interning at University Hospitals, ranked sixth scholastically in her graduating class of 104. She was a registered nurse before beginning her medical studies at SUI in 1956. A member of Alpha Omega Alpha, honorary scholastic medical society, Dr. Jaffe received the $500 Borden Award this year for meritorious research completed during her undergraduate medical training. Dr. Jaffe is the sister of **Dr. R. S. Jaggard**, of Oelwein.



Dr. Jeanne Jaggard Jaffe

Dr. J. S. Crandall has taken a leave of absence from his practice in Marshalltown for a three month period to observe methods at the Denver Children's Hospital and the Denver General Hospital. He plans to return to his general practice with **Drs. Sinning, Wessels** and **Irvine** at about Christmas time.

Construction is expected to be completed this fall on the new medical center in Amana. Upon its completion **Dr. Harold Moessner** and **Dr. Curtis Wuest** will move their offices from their present location in a home next door to the Center.

Dubuque physicians **Dr. Louis P. Alt** and **Dr. D. F. Ward** recently attended a University of Wisconsin institute dealing with the chemical treatment of cancer. Several Dubuque patients have been treated at Madison.

Dr. Everett B. Getty and **Dr. Andrew D. Smith**, of Primghar, have donated a large industrial emergency first aid kit to the Primghar Volunteer Fire Department. The kit, a large metal box with drawers, contains generous supplies of various sizes of bandages, ointments, medications and tourniquets. A special dust-proof box is being constructed to house the case, and will be carried on the fire trucks at all times.

Approximately 100 representatives from western Iowa hospitals and clinics met on Wednesday,

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Surgical Technic, Two Weeks, November 7, December 5
Blood Vessel Surgery, One Week, November 28
Surgery of Colon & Rectum, One Week, November 28
Gallbladder Surgery, Three Days, October 17
Surgery of Hernia, Three Days, October 20
General Pediatrics, Two Weeks, October 3
Electrocardiography & Heart Disease, Two Weeks, October 3
Internal Medicine, Two Weeks, October 17
Hematology, One Week, October 10
Diagnostic Radiology, Two Weeks, October 17
Board of Surgery Review, Part I, Two Weeks, November 7
Gynecology, Office & Operative, Two Weeks, October 31
Vaginal Approach to Pelvic Surgery, One Week, November 28
Obstetrics, General & Surgical, Two Weeks, October 3
Fractures & Traumatic Surgery, Two Weeks, October 24

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September 7 for a one-day workshop on communicable diseases at Mercy Hospital, Council Bluffs. The purpose of the program was to review and standardize procedures to be followed in the event of an outbreak of a communicable disease. The workshop was an extension of a week-long program sponsored last March by the State Department of Health and sessions were attended by representatives of both hospitals and local public health services. Speakers on the program were **Miss Claire M. Coppage**, U. S. Public Health Service; **Dr. Ralph Heeren**, deputy commissioner of the State Department of Health; **Dr. Ralph Mohri**, assistant professor of veterinary hygiene, Iowa State University, Ames; and **Dr. Paul Pedersen**, president of the Pottawattamie County Medical Society.

Dr. A. L. Murphey, of Fredericksburg, is the originator of a new project which is being sponsored by the Fredericksburg Lions Club. A list of willing blood donors in the Fredericksburg area has been compiled as a time-saving measure for use when a sudden need for blood arises.

Mr. Robert G. Gibbs, of Des Moines, the executive secretary of the Iowa Pharmaceutical Association, was elected president of the Iowa Interprofessional Association in its annual meeting at the State Medical Society building in Des Moines on Friday, September 9. The Interprofessional group was organized to improve health conditions in Iowa and promote health education. Members are representatives of the Iowa Veterinary Medical Association, Iowa Nurses Association, Iowa State Medical Society, Iowa Dental Association, Iowa Hospital Association and Iowa Pharmaceutical Association.

Other officers elected were **Elizabeth Karr**, R.N., president-elect; **S. L. Hendricks**, D.V.M., vice-president; and Mr. Donald L. Taylor, executive director of the Iowa State Medical Society, re-elected secretary-treasurer. Retiring president is **Dr. Floyd Burgeson**, of Des Moines.

SPEAKERS' BUREAU SCHEDULES

TELEVISION

KVTV—Sioux City, Iowa

(Please check with your newspaper for program time)

October 2 Anesthesia and Recovery Room
October 9 .. Radioactive Diagnosis and Treatment
October 16 Intervertebral Disc
October 23 Religion and Health
October 30 Head Injuries

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DEATHS

Dr. J. H. Stalford, formerly of Sac City, died on August 6 in Los Angeles.

Dr. Herbert P. Walker, 83, a retired Clarion physician, died August 17. He had practiced medicine in partnership with the late Dr. E. D. Tompkins until the latter's death, and continued in practice alone until his retirement in 1950.

Dr. Edwin S. Korfmacher, 56, a Grinnell physician and surgeon for 30 years, died August 3 at St. Mary's Hospital in Rochester, Minnesota, where he had been a patient for several weeks.

Dr. Emory L. Mauritz, 54, a Des Moines urologist, died of a heart ailment, Sunday, August 28, at the Des Moines Veterans Hospital, where he had been employed the last six months. Dr. Mauritz had also been of the staffs of Iowa Lutheran, Mercy and Methodist Hospitals from 1930 until 1959.

Dr. James McBryde Knox, 81, a lifelong resident of Cedar Rapids, died in a hospital Monday, September 5, following a brief illness.

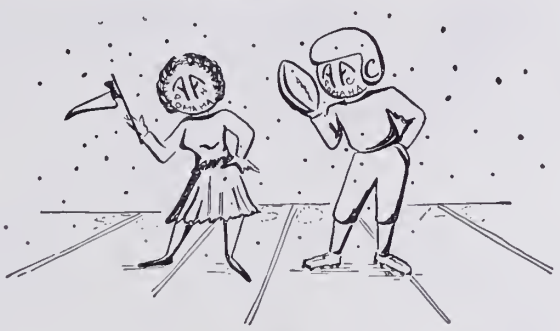
Dr. Conda C. Heady, 98, a retired Ottumwa physician and surgeon, died Saturday, September 4, at the Davis County Hospital, Bloomfield, where he had been a patient two months. He had been ill two years.

GRISEOFULVIN FOR WHIPLASH INJURIES

Effective treatment of bursitis pain from "whiplash" injuries to the neck and the shoulder-hand syndrome by the administration of griseofulvin was reported by Dr. Howard Rusk in the August 14 issue of the NEW YORK TIMES. Griseofulvin is an oral antibiotic heretofore used principally for the treatment of certain superficial fungus infections of the skin, hair and nails. In June of this year, however, four Philadelphia physicians reported successful employment of the drug in treating the shoulder-hand syndrome. Their series included some patients with arthritis, and no relief of pain or other symptoms could be detected in those people, but the results in the shoulder-hand cases were described as good.*

Dr. Rusk noted that the group of patients treated thus far is too small to permit the drawing of firm and permanent conclusions.

* Cohen, A., Daniels, R., and Kanenson, W.: Treatment of shoulder-hand syndrome with griseofulvin. J.A.M.A., **173**:542-543. (June 4) 1960.



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Coming Meetings

(Continued from page 600)

Oct. 31-Nov. 2	**Association of American Medical Colleges.** Diplomat Hotel, Hollywood Beach, Florida
Oct. 31-Nov. 3	**Interstate Postgraduate Medical Association of North America.** Pittsburgh-Hilton Hotel, Pittsburgh
Oct. 31-Nov. 3	**Omaha Mid-West Clinical Society.** Civic Auditorium, Omaha
Oct. 31-Nov. 3	**Southern Medical Association.** St. Louis
Oct. 31-Nov. 4	**Radiology for Specialists.** Center for Continuation Study, University of Minnesota
Oct. 31-Nov. 4	**American Public Health Association Annual Meeting.** San Francisco
Oct. 31-Nov. 4	**Below-Knee Prosthetics.** University of California at Los Angeles
Oct. 31-Nov. 11	**Gynecology, Office and Operative.** Cook County Graduate School of Medicine, Chicago
Nov. 2-3	**Annual Postgraduate Assembly.** San Diego County General Hospital, San Diego
Nov. 2-5	**American Society of Tropical Medicine and Hygiene.** Biltmore Hotel, Los Angeles
Nov. 3-5	**Fractures.** University of Colorado Medical Center, Denver
Nov. 4-5	**Central Society for Clinical Research.** Drake Hotel, Chicago
Nov. 4-6	**County Medical Societies Conference on Disaster Medical Care.** Palmer House, Chicago
Nov. 7-9	**Obstetrics.** The University of Kansas Medical Center, Battenfield Auditorium, Kansas City
Nov. 7-9	**Physical Medicine for Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
Nov. 7-11	**Electrocardiography (American College of Physicians).** Salt Lake County General Hospital and World Motor Hotel, Salt Lake City
Nov. 7-18	**Board of Surgery Review, Part I.** Cook County Graduate School of Medicine, Chicago
Nov. 11	**Fourth Annual Symposium, Chicago Diabetes Association.** Offield Auditorium. Passavant Hospital, Chicago
Nov. 14-18	**Recent Advances in the Diagnosis and Treatment of Diseases of the Heart and Lungs (American College of Chest Physicians).** Park Sheraton Hotel, New York City
Nov. 15-19	**Puerto Rico Medical Association.** Santurce, Puerto Rico
Nov. 16-18	**Ophthalmology for General Physicians (Refraction).** Center for Continuation Study, University of Minnesota, Minneapolis
Nov. 17	**Neurology and Psychiatry in General Practice.** University of Nebraska College of Medicine, Omaha
Nov. 18-19	**American Medical Writers' Association.** Hotel Morrison, Chicago
Nov. 19-21	**International Symposium on Fibrinolysis (University of Colorado Medical Center).** Aspen, Colorado
Nov. 28-Dec. 1	**American Medical Association 14th Clinical Meeting.** Washington, D. C.
Nov. 28-Dec. 2	**Blood Vessel Surgery.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 2	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 9	**Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago

CANCER SEMINAR IN TUCSON

Physicians who are thinking of taking a vacation in the Southwest next winter can reap a tax advantage as well as an educational one in arranging to attend the Ninth Annual Seminar of the Arizona Division of the American Cancer Society, at the Tidelands Motor Inn, Tucson, January 12, 13 and 14, 1961. The meeting will be devoted to the various aspects of tumor formation and therapy: chemotherapy, virology, endocrinology, environmental factors, etc.

The faculty will consist of Jeanne C. Bateman, M.D., Washington, D. C.; Arthur W. Ham, M.B., Toronto; C. Howard Hatcher, M.D., Stanford University; Charles Heidelberger, Ph.D., University of Wisconsin: Roy Hertz, M.D., National Institutes of Health, Washington, D. C.; Henry S. Kaplan, M.D., Stanford University; Paul Kotin, M.D., University of Southern California; Chester M. Southam, M.D., Sloan-Kettering Institute; and Arnold D. Welch, Ph.D., M.D., Yale University.

For further information, address the Arizona Division's office, 37 East Jackson Street, Tucson.

HAY FEVER RELIEF

Eighty-nine per cent of a group of 56 children suffering from allergic rhinitis obtained excellent or good relief from symptoms after receiving a new antiallergic drug methdilazine hydrochloride, according to a recent clinical study by two Memphis physicians, Drs. Lloyd V. Crawford and Fred T. Grogan.* They conducted the study at the University of Tennessee's Pediatric Allergy Clinic and the Frank T. Tobey Memorial Children's Hospital, Memphis.

Methdilazine hydrochloride (Tacaryl® Mead Johnson) is a recently synthesized phenothiazine derivative that these doctors have said "is rapidly and almost completely absorbed from the gastrointestinal tract, and very rapidly cleared from the blood stream. The duration of action persists as long as eight to 12 hours after a single dose of 4 mg./Kg."

The study included 56 children ranging in age from four to 16 years, with an average age of 7.8 years. All had allergic rhinitis without asthmatic flareups. Patients were given one capsule twice a day for a period of one week, but half of them received placebos. Of those who received 8 mg. of Tacaryl twice a day, 89.3 per cent showed significant relief; of those who got 4 mg. twice daily, 87.6 per cent were benefited. Of those who received placebos, about 25 per cent seemed to show good results.

The only side effect of any importance that the doctors noted was drowsiness. Five of the 56 children complained of some sedation.

* Crawford, L. V., and Grogan, F. T.: Clinical evaluation of methdilazine hydrochloride, new antihistamine, using double-blind and placebo control. TENNESSEE M. J., 53:307-310, (July) 1960.



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CLINICAL CARDIOPULMONARY PHYSIOLOGY

The American College of Chest Physicians will present its Fifteenth Annual Postgraduate Course at the Sheraton Hotel, Chicago, October 24-28, on Clinical Cardiopulmonary Physiology. The faculty will include Edward A. Gaensler, M.D., Harvard; Alvan L. Barach, M.D., Columbia University; George R. Menelly, M.D., Vanderbilt University; C. Walton Lillehei, M.D., University of Minnesota; Benjamin M. Gasul, M.D., University of Illinois; John Rankin, M.D., University of Wisconsin; Hurley L. Motley, M.D., University of Southern California; H. Frederic Helmholz, Jr., M.D., Mayo Clinic; John S. Gray, M.D., Northwestern University; Domingo M. Aviado, M.D., University of Pennsylvania; and a number of other eminent men.

Additional information can be secured from the office of the College, 112 East Chestnut Street, Chicago 11.

S.U.I. DISCOVERY ON ANTIBODY FORMATION

Findings which may be valuable in the search for a way to regulate antibody formation by the human body were reported in Washington, D. C., on September 2, at the Fifth International Congress on Nutrition, by Dr. William B. Bean, head of the S.U.I. Department of Internal Medicine. He said his research team had found that an induced deficiency of two vitamins in volunteers eliminated antibody response to tetanus and typhoid immunizing agents.

Elimination of antibody response to a transplanted organ is the biggest and one of the last obstacles still to be overcome in perfecting a way to replace diseased or worn-out organs.

Although the S.U.I. experiments show the possibility of a promising breakthrough, Dr. Bean emphasized that conclusions on the value of his group's findings must await more extensive research.

In the Iowa City studies, deficiencies of pantothenic acid and of vitamin B6 were created. A shortage of the former produced only minor interference with antibody formation against the tetanus and typhoid agents. Skin grafts applied to such patients appeared to slough off even more quickly than did those applied to control subjects. The next step will be an attempt to discover whether a combination of two vitamin deficiencies will reduce antibody response sufficiently to allow a foreign graft to take.

In the course of their experiments, which have been under way for seven years, the S.U.I. researchers induce pantothenic acid deficiency by restricting the volunteers to a synthetic diet composed mostly of chemical substances and purified foods. The side effects are irritability, numbness



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and tingling of the hands, muscular and abdominal cramps, fatigue and a peculiar gait, Dr. Bean said. A lack of vitamin B6 causes the skin to become dry and scaly, and produces some of the pantothenic acid deficiency symptoms in addition.

RHEUMATIC FEVER PROGRAM IN MINNESOTA

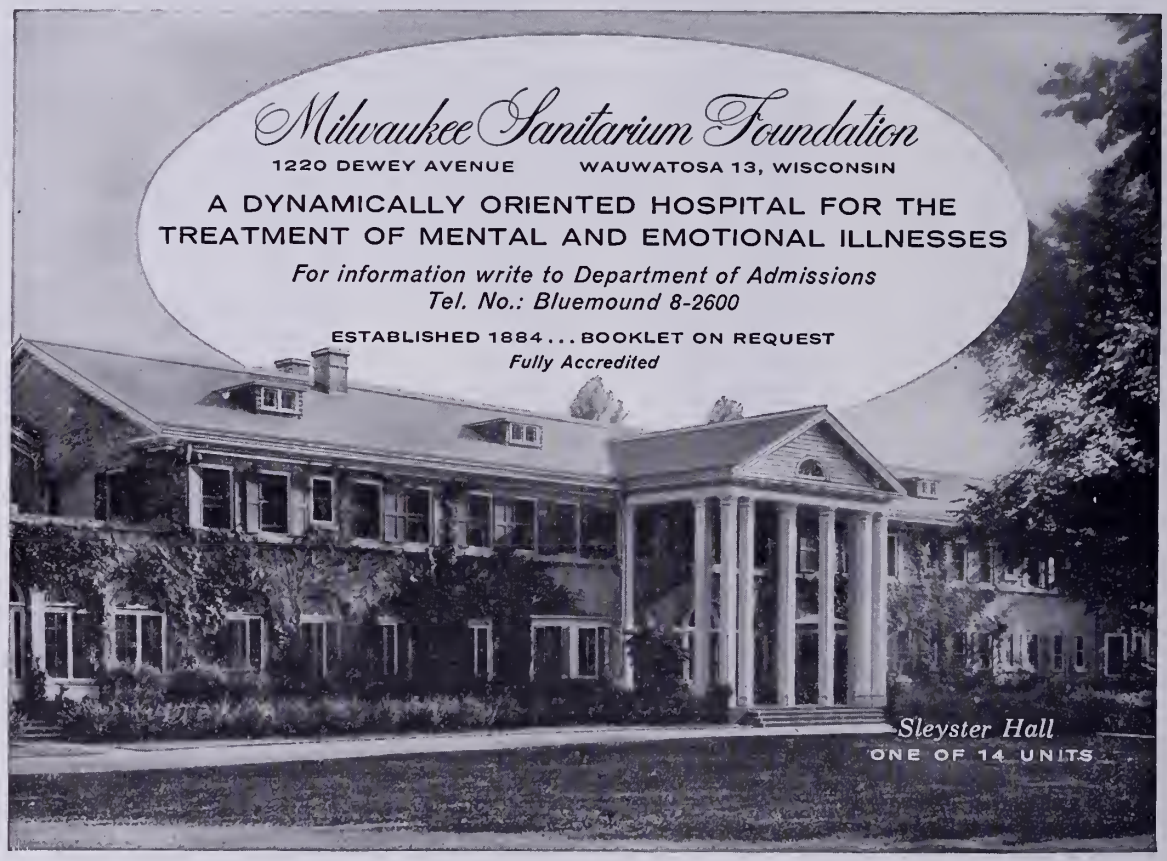
The Minnesota State Medical Association, together with the Department of Health, Pharmaceutical Association and Heart Association of that state, has been engaged for six months in a state-wide program to reduce recurrent attacks of rheumatic fever by providing penicillin or sulfa drugs at reduced cost to patients for whom the long-term purchase of such medications represents a financial burden.

Since the program began, last February, 350 physicians in 62 counties have enrolled a total of 1,100 patients. The Minnesota State Department of Health provides the doctors with coded prescription blanks on which each patient can be authorized to get a three-months supply of the indicated drug from a local pharmacist. The druggist forwards the prescription to the wholesale druggist for filling.

A case registry is maintained by the Minnesota State Department of Health, and physicians make yearly reappraisals of the status of each patient for purposes of reapplication, follow-up and data collection.

The project is the outgrowth of a study made during 1958 which showed that the 1,400 physicians who returned questionnaires had diagnosed and treated 2,400 cases of acute rheumatic fever during the previous year, and that more than 1,000 of those patients were not continuing with the recommended medications. Nearly 40 per cent of those cases were said to be recurrences, and it was estimated that in nine instances out of ten the relapses could have been avoided through a secondary prevention program costing about $20,000 per year. The cost of hospitalization and medical care of the recurrent cases, in contrast, was estimated to be $175,000 annually.

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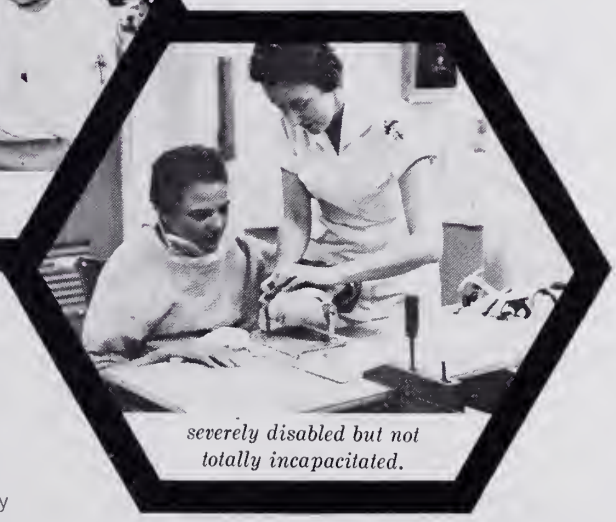
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SABIN VACCINE WON'T BE CHEAP TO MAKE

The new Sabin oral vaccine for the prevention of poliomyelitis will cost considerably more than some early reports have indicated. This is the view of officials at Wyeth Laboratories, Philadelphia, who state that it will present one of the most difficult production problems ever experienced in the biological field. "Maybe the process will be cheap someday," they are willing to grant, "but it certainly is not going to be cheap initially." It is their guess that at the start it will cost about the same as the Salk vaccine.

A Wyeth spokesman maintains that the earliest probable date for the new vaccine to go into production in quantity is mid-1961. To date, the firm has produced several million doses in experimental lots.

The primary reason for the higher-than-predicted cost of Sabin vaccine and for the difficulty of producing it is that "we are talking about a living virus that must be produced with meticulous care to insure the utmost safety."

Dr. Sabin has observed that when his vaccine becomes available—and most firms in the industry agree that it is about nine months away—it will be administered under the auspices of the Public Health Service on a community or group basis.

PARK HOSPITAL BECOMES CHARITABLE FOUNDATION

Park Hospital, Mason City, one of the last hospitals in the state to be operated as a private institution, ceased to be owned by physician proprietors on September 12, and became the property of the Park Hospital Foundation. There will be no change in the personnel or in the operation of the institution, but the new arrangement is expected to provide efficient means for raising capital and expanding the facilities.

Heretofore, all expenses of operating and remodelling the Hospital have been underwritten by the doctors of the Park Clinic, and all income has reverted to the Hospital. The Foundation will have no stockholders, but its members—laymen and physicians—will operate the Hospital through an annually-elected board of directors. Annual memberships in the Foundation cost $10, and life memberships $1,000. All citizens of the Mason City area are eligible for membership in the Foundation, and all members of the Cerro Gordo County Medical Society are eligible for membership on the Hospital medical staff.

The officers for the coming year are an attorney, Mr. Nathan Levinson, president; Dr. F. W. Saul, vice-president; Mr. Earl M. Dean, secretary; and Dr. F. W. Kapke, treasurer.

Park Hospital has been in continuous operation since 1909.

Journal of the IOWA STATE MEDICAL SOCIETY

Vol. L NOVEMBER, 1960 No. 11

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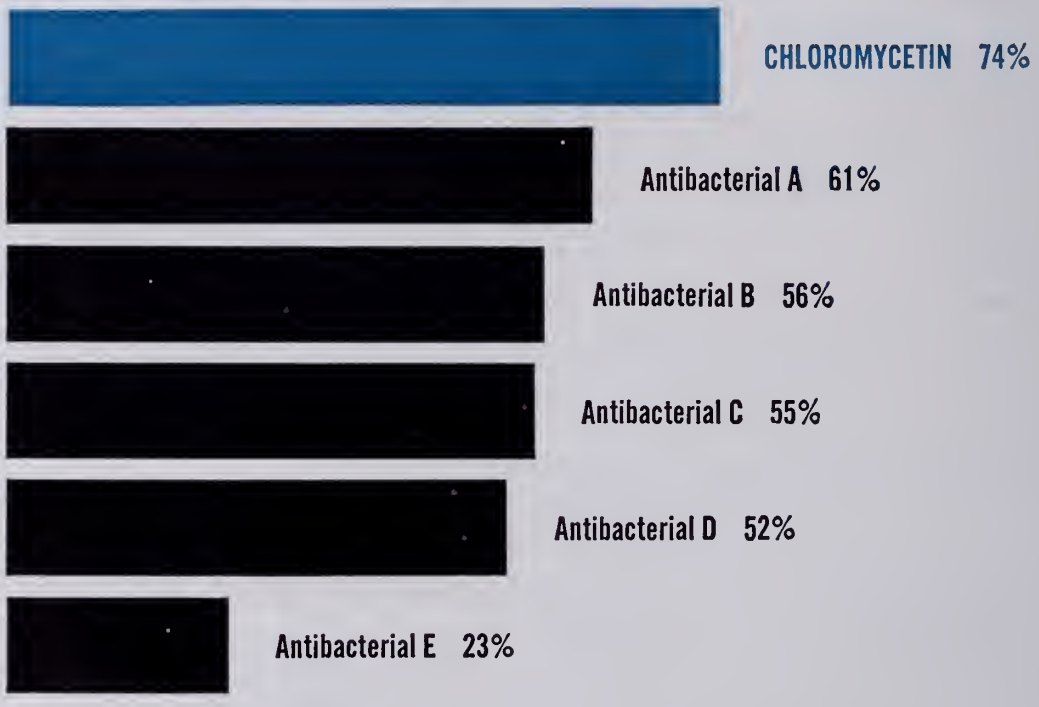
Address all communications to the Editor of the Journal, 529-36th Street, Des Moines 12

Second-class postage paid at Fulton, Missouri. Acceptance at special rate of postage provided for in Section 103, Act of October 2, 1917, authorized July 8, 1918. Publication office: 1201-5 Bluff Street, Fulton, Missouri. Editorial Office: 529-36th Street, Des Moines 12, Iowa. Subscription Price: $3.00 Per Year.

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The Month in Washington



Washington, D.C.—Representatives of the medical and health professions, the federal government and national civic groups are cooperating in the development of a program for starting the general use of the Sabin live-virus poliomyelitis vaccine next year.

Shortly after clearing the Sabin vaccine for general use, Leroy E. Burney, M.D., surgeon general of the Public Health Service, asked 23 nongovernment organizations to designate members to serve on a Surgeon General's Committee on Poliomyelitis Control.

An Agenda Committee met with PHS officials in Atlanta October 11 and 12 and drafted a basic agenda for a meeting of the Control Committee in midwinter. At the Atlanta meeting, preliminary consideration also was given to administrative and technical problems involved in use of the live-virus vaccine developed by Albert B. Sabin, M.D., of Cincinnati.

The Agenda Committee was made up of representatives of the American Medical Association, the American Academy of General Practice, the American Academy of Pediatrics, the Association of State and Territorial Health Officers, the Children's Bureau and the National Foundation.

The Sabin vaccine is not expected to be available in substantial quantities before mid-1961.

The chief question is whether the vaccine—which is given orally in the form of pills, liquid or candy—will be administered on an individual or on a mass community basis. The PHS special committee that recommended approval of the oral vaccine said that the community basis would be better.

"Because of the unique nature of live poliovirus vaccine, with its capacity to spread the virus in a limited manner to non-vaccinated persons, the committee cannot make recommendations for manufacture without expressing concern about the manner in which it may be used," the special committee said.

"The seriousness of this responsibility can be illustrated, for example, by the known potentiality of reversion to virulence of live poliovirus vaccine strains, and the possible importance of this feature in the community if the vaccine is improperly used.

"For example, the vaccine has been employed largely in mass administrations where most of the susceptibles were simultaneously given the vaccine, thus permitting little opportunity for serial human transmission; or, it has been administered during a season of the year when wild strains have usually shown limited capacity for spread. This experience should provide the basis for developing usable practices for the U.S.A."

The special committee also said attention should be given to administration to special groups, such as very young children, pregnant women, and susceptible adults.

"Even more important is the planned continuation of this program as long as necessary to achieve and maintain the required results," the committee said.

The committee was headed by Roderick Murray, M.D., of the National Institutes of Health. Its other members were four M.D.'s and one Ph.D., all of whom were connected with universities except for one M.D. from the PHS's Communicable Disease Center at Atlanta.

Neither the committee nor Dr. Burney anticipated that the live-virus vaccine would replace the killed-virus Salk vaccine used since April, 1955.

"It appears probable that only a unified national program which utilizes each of the available types of vaccine to its best advantage can accomplish the total prevention of outbreaks," the committee said.

Dr. Julian P. Price, of Florence, S. C., chairman of the AMA's Board of Trustees, predicted the live-virus vaccine "will be one more powerful weapon against an ancient and crippling disease."

He said that physicians "have conscientiously pushed immunization with the Salk vaccine and now, with this new vaccine, the profession is hopeful that even better results can be achieved."

* * *

Five states were ready soon after the effective date of Oct. 1 to submit plans for participation in the federal-state program of health care for the needy and near-needy aged persons which recently was enacted into law. The states were Arkansas, Michigan, New Mexico, Oklahoma and Washington.

As of early October, another 25 states were preparing to consider legislation to set up such a program or had indicated a willingness to proceed without new legislation. They were Alabama, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kentucky, Louisiana, Massachussets, Montana, Nevada, New Jersey, North Dakota, North Carolina, Ohio, Pennsylvania, Rhode Island, Utah, West Virginia, Virginia and Wyoming.

Arthur S. Flemming, Secretary of Health, Education and Welfare, urged all states to take part in the program as soon as possible. But he also said he hopes that Congress in the next session will approve a Republican plan for a supplementary federal-state program to help provide private health insurance for elderly persons who cannot meet their medical expenses.

It appears that the issue probably will arise in Congress next year, for some Democrats also have said they will again sponsor legislation that would provide health care for aged persons through the Social Security system.

* * *

The AMA has launched a "comprehensive study and action program" to guide Americans in spending their health-care dollars more wisely.

The AMA's new Commission on Medical Care Costs has set out "to find answers to many questions being raised about medical care costs and to present the findings frankly and forthrightly to the medical profession and to the public."

The program is "dedicated to promoting the highest quality health care at the lowest cost." Louis M. Orr, M.D., of Orlando, Fla., chairman of the Commission, said that "any barrier that stands in the way of this objective should be removed—immediately."

One of these barriers is money wasted on ineffective non-prescription or over-the-counter drug products, such as vitamins, food fads, and rheumatism and arthritis remedies. The AMA's Council on Foods and Nutrition has estimated that much of

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the estimated $350 million spent annually on self-prescribed vitamins is wasted.

The AMA is urging physicians to alert their patients and the public to the latent dangers involved in self-prescribing and to the folly of throwing their health-care dollars away on quackeries.

On another front in the war against quackery, Food and Drug Commissioner George P. Larrick reported that during the past 12 months the FDA had seized falsely promoted vitamins, minerals and other so-called "health foods" valued in excess of $1.5 million. He said that the amount of misinformation, pseudo-science and plain "hokum" on health care reaching the public through books and magazine articles is increasing.

SPEAKERS' BUREAU SCHEDULES

TELEVISION

KVTV—Sioux City, Iowa

(Please check with your newspaper for program time)

November 6 Hip-Pinning
November 13 Foot Trouble
November 20 Acne
November 27 Minor Surgery

CORTISONE-LIKE DRUGS ARE BEING OVERUSED

"People with rheumatoid arthritis are taking cortisone-like drugs too often and in too large doses, resulting in serious side effects," Dr. W. D. Paul, professor of rehabilitation at the S.U.I. College of Medicine, told physicians attending a post-graduate course on arthritis and related conditions in Iowa City on September 23.

"We have found that if patients take too large a dose over a long period of time," he explained, "the cortisone-like drugs may cause these side effects: diabetes; loss of calcium in bones, resulting in fractures of the spine; and changes in blood vessels which result in a disease far worse than arthritis."

He believes that the difficulty stems from the fact that the tablets now on the market contain too much of the drug for a single dose. Cortisone, he contended, is not a miracle drug for arthritis, for it doesn't change the course of the disease. It stops pain and prevents swelling a little better than aspirin does, but most arthritics, in his opinion, don't need cortisone at all.

"At S.U.I.," Dr. Paul said, "we use cortisone in treating acute arthritis whenever we feel that it is indicated, but we always use it in small doses, and we watch the patient closely for any indication of side effects."

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COUNTY MEDICAL SOCIETIES DISASTER MEDICAL CARE CONFERENCE

The "father of the H-bomb," Edward Teller, Ph.D., will head a list of prominent speakers at the Eleventh Annual County Medical Societies Medical Care Conference, at the Palmer House in Chicago, November 4-6. The program will be sponsored by the AMA Council on National Security.

The conference highlight will be a presentation by the newly-formed Division of Health Mobilization of the U. S. Public Health Service which will outline a program of objectives and activities for preparing the nation to meet the health needs of the civilian population in the event of a national disaster.

Outlining the federal government's program will be Dr. W. Palmer Dearing, director of health services for the Office of Civil and Defense Mobilization, and Dr. Carruth J. Wagner, director of the Division of Health Mobilization.

Dr. Harold C. Lueth, of Evanston, chairman of the Council, has said, "Through this conference we hope to establish a closer working relationship with state medical societies and to assist and help them to be better prepared to meet all types of disasters. A portion of this year's program will be devoted to subjects which emphasize the necessity for cooperation and integration in planning with the Public Health Service and state and local civil defense agencies."

AMA SYMPOSIUM ON CLINICAL NUTRITION

On November 30, in Washington, D. C. (at the time of the AMA Clinical Session) a symposium on clinical nutrition will be conducted under the sponsorship of the AMA, in cooperation with the Medical Society of the District of Columbia. It will take up only the morning hours of that day.

The first of two panels, consisting of Dr. W. J. McGanity, of the University of Texas, Dr. S. M. Garn, of the Fels Research Institute, and Dr. G. V. Mann, of Vanderbilt, will discuss the diagnosis of nutrient deficiencies by physical examination, anthropometric evaluation and dietary appraisal, respectively. The second panel, consisting of Dr. R. L. Jackson, of the University of Missouri, Dr. R. E. Olson, of the University of Pittsburgh, and Drs. Mann and McGanity, will take up the management of dietary inadequacies.

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Vitamin A	4000 USP Units	Vitamin K (Menadione)	0.25 mg.
Vitamin D	400 USP Units	Rutin	10 mg.
Vitamin B-1	2 mg.	Sodium Molybdate	3 mg.
Vitamin B-2	2 mg.	Fluorine (Calcium Fluoride)	0.25 mg.
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Personals



Dr. Edward H. Rynearson, of the Mayo Clinic, spoke to the members of the Linn County Medical Society, on Thursday, September 8, at the Sheraton-Montrose Hotel, Cedar Rapids. His subject was "Syndromes Associated With Overactivity of the Adrenal Cortex." Dr. Rynearson is chairman of the sections of endocrinology and metabolism at the Mayo Clinic and professor of medicine at the Mayo Foundation for Medical Education and Research, and is past president of the Endocrine Society.

Dr. J. P. Cogley, of Council Bluffs, was installed as vice-president of the International College of Surgeons, September 28, at Winnipeg, Canada. He was elected to the post last May in Rome, Italy. Dr. Cogley, who is the first Midwesterner to be elected either president or vice president of the International College of Surgeons, expects his duties will involve some foreign travel during his year's term.

Dr. Cogley is a member of the American College of Surgeons, former head of surgery at Mercy Hospital, Council Bluffs, past president of Pottawattamie County Medical Society, a fellow of the American and International Colleges of Surgery, and professor of surgery at Creighton Medical School. He was president of the American Surgical Society in 1957.

Dr. Ernest Iglesias left West Union early in September for Ann Arbor, Michigan, where he will work for a year in the cardiovascular research laboratory at the university hospital. Thereafter, he plans to return to his joint practice with **Dr. W. E. Walsh.** In his absence **Dr. Albert Sanchez,** a Cuban like Dr. Iglesias, will practice with Dr. Walsh. Dr. Sanchez has practiced in Cuba, at the National Jewish Hospital in Denver, Colorado, and during the past year, at Mercy Hospital, Miami, Florida.

Dr. Gordon Flynn, of the Davenport Clinic, won a seat on the Davenport school board, in the September election. He will serve a three-year term.

Excavation has begun for a Marshall Erdman type of medical clinic building at Lake City,

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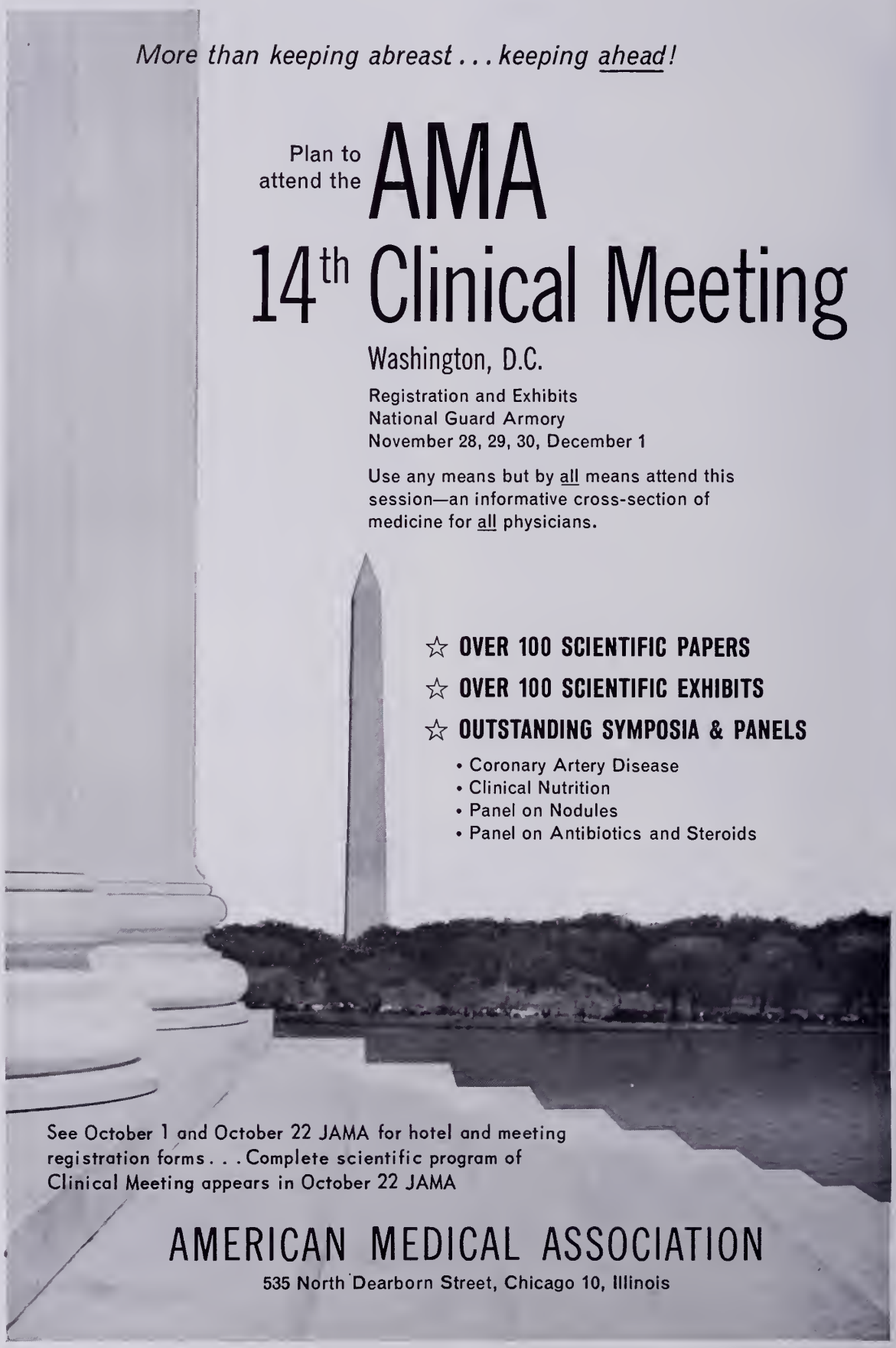
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- Clinical Nutrition
- Panel on Nodules
- Panel on Antibiotics and Steroids

See October 1 and October 22 JAMA for hotel and meeting registration forms . . . Complete scientific program of Clinical Meeting appears in October 22 JAMA

AMERICAN MEDICAL ASSOCIATION

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Iowa. The building will be located on property owned by the Woodlawn Building Corporation, the officers of which include **Drs. G. S. Rost, Ashton McCrary, Paul Ferguson** and **Dale Christensen.** It is expected that the building will be completed in December of this year. The McCrary-Rost Hospital building is to be razed as soon as the new Stewart Memorial Community Hospital has been completed and begins functioning.

Dr. Paul Pedersen, of Council Bluffs, has been named to fill a vacancy on the five-member Iowa State Board of Health. He received his commission from **Governor Herschel Loveless.** Dr. Pedersen, who is to complete an unexpired term ending January 10, 1961, has been a general practitioner in Council Bluffs since 1953. He received his medical degree from the University of Nebraska in 1945, served several years as an officer in the U. S. Public Health Service, and received a master of public health degree from the Johns Hopkins University school of hygiene in 1952.

Dr. F. William Saul, head of the radiology department at Park Hospital and Clinic, Mason City, was the main speaker at the 21st annual convention of the Iowa Society of X-ray Technicians, September 15-17 at the Hanford Hotel in Mason City.

Meredith G. Lewis, chief technician at the University of Texas Medical Branch, Galveston, Texas, and past president of the American Society of X-ray Technicians, was a guest at the convention. He presented a refresher course on "Positioning and Technic."

The physicians who presented papers during the scientific session were **Dr. John K. MacGregor; Dr. J. R. Utne** and **Dr. C. O. Adams,** all of Mason City.

The technicians presenting papers were **Mr. Roger Allen,** secretary-treasurer of the Iowa Society of X-ray Technicians and **Mr. James Chestnut,** chief technician at Mercy Hospital, Mason City.

Dr. Stephen Ware, public health physician in Iowa City, has resigned his post and moved to St. Petersburg, Florida, where he will be on the staff of the Veterans Administration Domiciliary at Bay of Pines Hospital. He has been a general practitioner in Iowa City for the past 15 years.

Dr. William I. Evans, after 20 years of medical practice in Sac City, has accepted a position in the psychiatry department at the Veterans Administration Hospital at Jefferson Barracks, Missouri. He began work there early in October.

THE AMERICAN CANCER SOCIETY

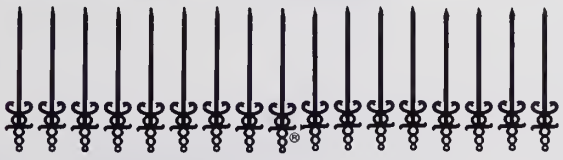
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Dr. William Keettel, head of the Department of Obstetrics and Gynecology at the SUI College of Medicine, spoke at the October 13 meeting of the Linn County Medical Society held in the Sheraton-Montrose Hotel, Cedar Rapids. He spoke on the subject "Amenorrhea: Diagnosis and Management."

Dr. James Paul Jacobs, an instructor at the SUI Hospitals in the Department of Obstetrics and Gynecology, was married to **Miss Nancy Johnston**, of Davenport, on October 1 in St. John's Methodist Church, Davenport. The bride is a graduate of the SUI College of Nursing and is on the staff of the pediatrics division of University Hospitals.

Dr. Vernon Hartley has begun his first year of a residency in psychiatry on the staff at the Mental Health Institute in Cherokee. Dr. Hartley had his undergraduate training at Rensselaer Polytechnic Institute, receiving a Bachelor of Science degree in biology. He served for 2½ years as a naval officer during World War II and completed his medical training at Albany Medical College in New York, and interned at St. Clare's Hospital there. He was a private practitioner for a time in New York and Las Vegas before coming to Cherokee.

Dr. Jon C. Thorson, son of **Dr. and Mrs. John A. Thorson**, of Dubuque, was married to **Miss Sharon Kaye Reetsma**, of Davenport, on Saturday, October 1, in St. Paul's Lutheran Church, Davenport. Dr. Thorson is a graduate of SUI College of Medicine. He completed his residency in ophthalmology at University Hospitals and is now serving as a captain in the Air Force and is stationed in Long Island, New York.

On August 29, when **Dr. N. E. Weems**, of Paullina, had completed 40 years of practice there, he related some of his memories to a reporter from his town's newspaper. He said that when he arrived in Paullina for the first time, in 1920, he was driving a model-T Ford roadster complete with clincher rims and side-curtains. The town's hitching posts were just being taken out, and livery barns were being converted to garages. Likewise, the town pump and the watering troughs along the streets were being removed. Until the streets were paved, automobile travel was almost impossible inside the town as well as outside of it during winter and spring.

He recalled that people went to hospitals, at that time, only for major operations, and then only after being sold on the idea. Blood transfusions were considered major procedures, and shortly before coming to Paullina, Dr. Weems

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had served as an assistant to **Dr. P. B. McLaughlin**, of Sioux City, who had made a name for himself as a specialist in transfusions and major surgery under local anesthesia. Prior to that time, well-to-do patients had gone to Chicago by train for transfusions, transporting their donors along with them.

Several serious epidemics hit Paullina during Dr. Weems's early years of practice. He had arrived two years after the first big influenza contagion, but remembers that in the early 1920's there was one in which he had as many as 10 and 11 patients in a single family under his care. In the late 1930's there was an epidemic of equine encephalitis that kept both veterinarians and physicians busy, and an outbreak of "epidemic yellow jaundice," now known as infectious hepatitis, occurred in 1935.

Dr. T. T. Bozek has filed for election to the school board in Iowa City.

Dr. John L. Klein, of Muscatine, is an organist by avocation, and has installed a 1927 Wurlitzer pipe organ in his home. Housing the instrument required extensive remodelling. It occupies what had been a 9′ x 15′ porch, a basement room of similar size and an entire side of his recreation room. Dr. Klein had owned an electric organ for 20 years, and has been organist at St. Mathias Catholic Church, in Muscatine.

At the fall meeting of the Academy of Surgery, at Lake Okoboji, September 9 and 10, **Dr. James R. Mincks**, of Bloomfield, and **Dr. Clarkson L. Kelly**, of Charles City, were elected to membership. The major prerequisite is certification by the American College of Surgeons.

Dr. Charles A. Merulla, of Marion, has bought property on which he plans to construct a medical office building.

Dr. A. L. Olsen, who has been manager of the Veterans Administration Hospital in Knoxville since September 11, 1957, has been transferred to a similar post in Sheridan, Wyoming. He expected to leave some time during October. His successor has not yet been named.

Speaking at the annual meeting of the Linn County Cancer Society, **Dr. Harold W. Morgan**, of Mason City, treasurer of the Iowa Division of

ANNUAL CLINICAL CONFERENCE

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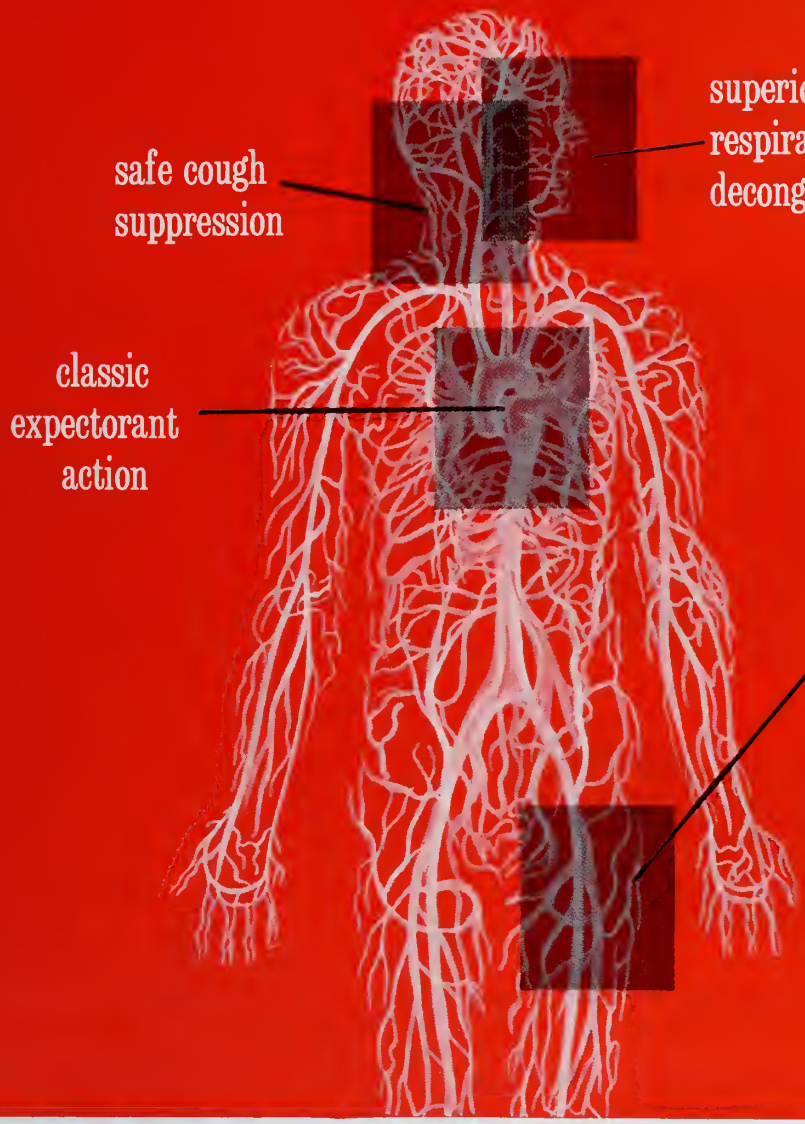
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the American Cancer Society, declared "Research is being well done, and the work of training doctors to combat cancer is well in hand, but I am concerned about the apathy of the general public toward the facts about cancer and what can be done." He cited the widely recognized opinion that heavy cigarette smoking is one of the causes of lung cancer, and that the widespread use of a new technic could virtually end cancer of the cervix.

At that meeting, **Mr. B. Bowen,** chairman of the chapter, announced the group's gift of $6,000 to the Margaret and Howard Hall Radiation Center, in Cedar Rapids, to be added to the sinking fund for the eventual replacement of the cobalt source.

Dr. H. W. Mathiasen, of Council Bluffs, was installed as president of the Iowa Chapter of the American Academy of General Practice at the organization's annual meeting, September 18, at the Hotel Savery, in Des Moines, succeeding **Dr. L. H. Jacques,** of Iowa City. The officers elected at the afternoon business meeting were **Dr. V. L. Schlaser,** Des Moines, president-elect; **Dr. Eugene Smith,** of Waterloo, vice-president, and **Dr. Arnold Nielsen,** of Ankeny, secretary-treasurer.

Dr. William Seidler, of Jamaica, and **Dr. Charles Hawkins,** of Clarion, were elected to three-year terms on the board of directors. **Dr. Elmer M. Smith,** of Eagle Grove, was named delegate to the AAGP national convention and **Dr. Clyde Smith,** of Gilmore City, alternate delegate.

The Republican and Democratic county chairmen spoke to the members of the Pottawattamie County Medical Society and Auxiliary, Tuesday night, September 20 at the Hotel Chieftain, Council Bluffs.

On September 11, the citizens of Rockwell, Iowa, expressed their welcome and appreciation to **Dr. Vincent Adams** for his decision to practice in the community by presenting him with a well-stocked deep-freeze.

Dr. Richard T. Smith has joined **Drs. Elmer G. Senty** and **C. R. Fesenmeyer,** of Central Clinic, Davenport, in the practice of internal medicine. Dr. Smith is a graduate of SUI and interned at Northwestern Hospital, Minneapolis. He then received three years of specialty training in Internal Medicine at Veterans Administration Hospital at Iowa City. After four years of private practice he returned to Veterans Administration Hospital, Iowa City, where he has been on the staff of the Department of Internal Medicine.

Dr. Herbert E. Gude, physician and surgeon, has joined **Dr. Thomas Graham** and **Dr. R. W. Dunlay,** in the practice of medicine both in Iowa Falls and Radcliffe. The three doctors were in pre-med, medical school and internships together at SUI, Creighton University and St. Margaret's Hospital in Kansas City, Missouri. Dr. Gude has just completed a three-year residency in general surgery at St. Elizabeth's Hospital in Lafayette, Indiana.

Dr. Anna H. Chipman, who until recently was associated with the Mental Health Institute in Clarinda, has established a general practice of medicine and surgery and is affiliated with Swedish Hospital and Northwest Memorial Hospital in Seattle, Washington.

Dr. William H. Clary, of Prescott, went to Longmont, Colorado, October 19. He expects to remain there about five months.

Dr. Robert W. Linthacum, of Dysart, attended a course in the management of mass casualties conducted at the Army Medical Service School, Fort Sam Houston, San Antonio, in June.

Dr. Martin I. Olsen, of Des Moines, was awarded the degree of Doctor of Humane Letters, *Honoris Causa,* at the commencement exercises of Luther College, Decorah, on May 29. Dr. Olsen is a graduate of the College in the class of 1899. The citation acknowledges the time he has devoted to projects of public interest, his work in helping to found both the Blue Cross and Blue Shield plans, and his generosity to Luther College. Dr. Olsen has also been the recipient of the Merit Award of the Iowa State Medical Society.

Dr. John T. Bakody, was elected to the executive committee of the Polk County Society for Crippled Children and Adults at the Thirteenth Annual Meeting of that group in September. **Dr. Everett A. Nitzke,** of Des Moines, was among those retiring board members who were presented awards at the meeting.

Dr. Edward H. Rynearson, of the Mayo Clinic, will speak to the members of the Scott County Medical Society at the November 1 meeting at the Outing Club in Davenport. His subject will be "Treatment of the Terminal Cancer Patient."

On October 1 **Dr. Paul J. Melichar** joined **Dr. Lyle R. Fuller,** of Garner, in the general practice of medicine. Dr. Melichar is a graduate of

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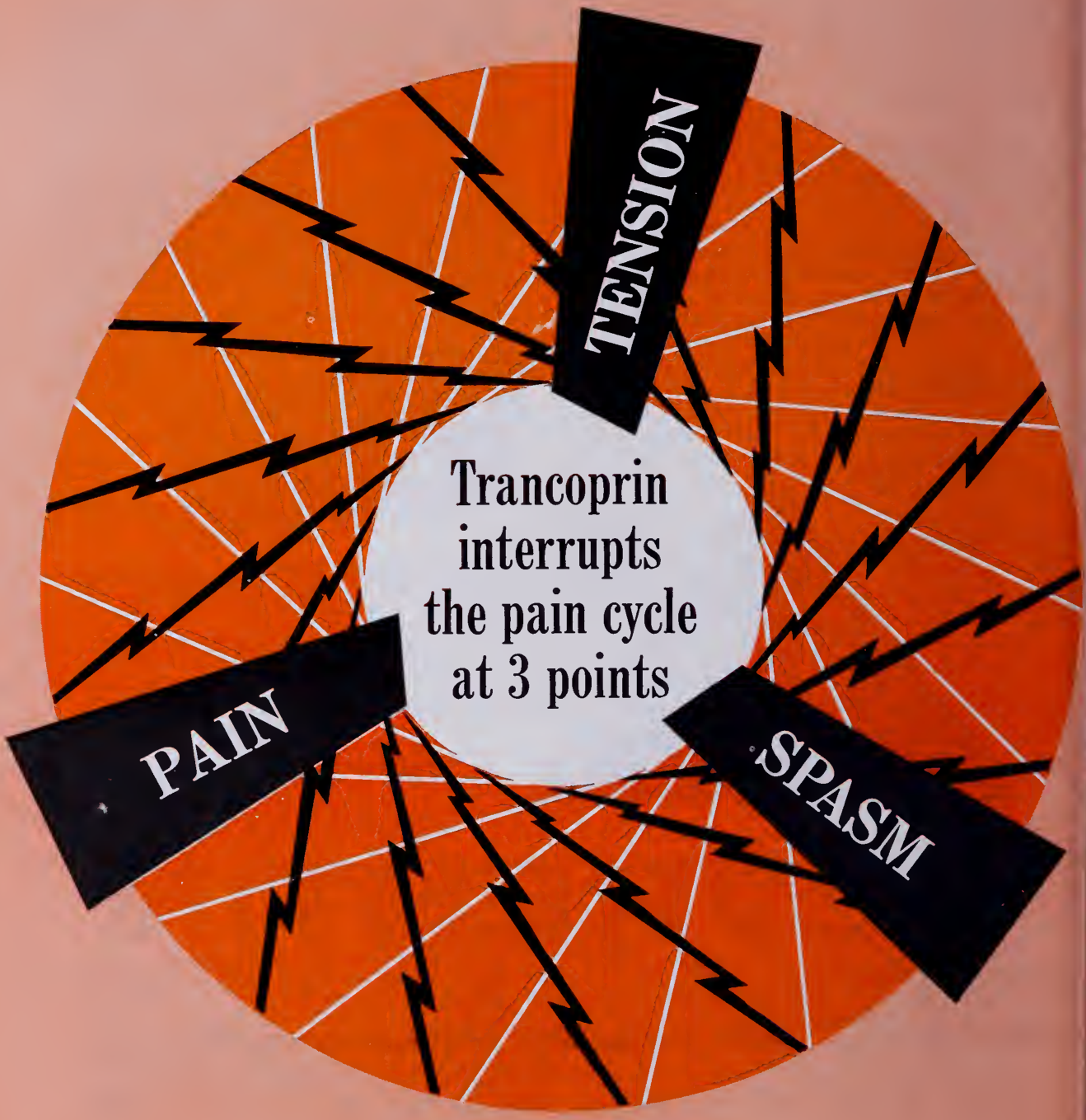
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Indications

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References: 1. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 2. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 3. Gruenberg, Friedrich: *Current Therap. Res.* 2:1, Jan., 1960. 4. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 5. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 6. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 7. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 8. Collective Study, Department of Medical Research, Winthrop Laboratories. 9. Hergesheimer, L. H.: An evaluation of a muscle relaxant (Trancopal) alone and with aspirin (Trancoprin) in an industrial medical practice, to be submitted.

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Electrocardiography & Heart Disease, Two Weeks, Spring
Diagnostic Radiology, Two Weeks, April 3
Board of Surgery Review, Part II, Two Weeks, May 15
Gynecology, Office & Operative, Two Weeks, February 20
Vaginal Approach to Pelvic Surgery, One Week, January 30
Obstetrics, General & Surgical, Two Weeks, April 3
Fractures & Traumatic Surgery, Two Weeks, March 20
Practical Cystoscopy, Ten Days, by appointment
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Advancements in Medicine, One Week, Spring
Urology, Two Weeks, April 24

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SUI and served his internship at Los Angeles County Hospital.

An award-winning exhibit from the State University of Iowa's College of Medicine was chosen by the National Institutes of Health for display at its Clinical Center in Bethesda, Maryland, from October 19-November 1. The exhibit, which was also shown October 9-14 at the annual meeting of the Academy of Ophthalmology and Otolaryngology in Chicago, illustrates the results of several years of intensive investigation by SUI scientists involving the chamber angle of the eye. The exhibit won the gold medal Hektoen Award at the AMA's annual meeting last summer, and it also won the top award for medical illustration and was selected for an award as the best display in the ophthalmology section at the same meeting.

Associated in the research and preparation of the exhibit were **Dr. Hermann M. Burian**, a professor, **Dr. Gunter K. von Noorden**, a resident physician, and **Lee Allen**, an associate, all in the Department of Ophthalmology, and **Dr. I. V. Ponseti**, a professor of orthopedic surgery.

Dr. Earl Parsons, the psychiatrist at the Des Moines County Health Center and a numismatist, got a penny dated 1994 in a handful of change late in September. "Right now, I wouldn't take $5,000 for it," he said. The mint's error may make the coin exceedingly valuable.

Dr. and Mrs. E. M. Eneboe, of Hawarden, flew to Bozeman, Montana, to spend September 9 and 10. Dr. Eneboe attended a medical meeting there, and they visited relatives.

At the regular meeting of the Woodbury County Medical Society, held at the Sioux City Country Club on Thursday, October 20, **Dr. F. Miles Skultety**, an associate professor of neurology at SUI, spoke on "Differential Diagnoses and Treatment of Comatosed Patients."

The meeting of the Polk County Medical Society, on October 19 at the Savery Hotel, in Des Moines, began with the showing of a film "The Disability Decision." **Dr. Claude J. Ehrenberg**, of Minneapolis, then spoke on "Some Aspects of Alcoholism, and Alcoholics Anonymous."

One of 17 guest speakers at the Twenty-fifth Annual Session of the International Medical Assembly of Southwest Texas, in San Antonio Jan-

uary 23-25, will be **Dr. Wallace W. McCrory,** head of pediatrics at the SUI College of Medicine.

More than 400 physicians from Webster and 26 surrounding counties were invited to attend the Third Annual Physicians' Scientific Seminar on Cardiovascular Diseases, held at the Hotel Warden, Fort Dodge on Thursday, October 13. The seminar was sponsored by the Coon Valley Council with the Webster County Heart Committee acting as host. Principal objective of the seminar was to acquaint general practitioners with latest research findings in the field of cardiovascular diseases and the practical application of these findings in their practices.

Principal speakers were **Dr. Arthur C. Kerkhof,** clinical associate professor of medicine, University of Minnesota; **Dr. J. M. Martt,** director of the heart station, University of Missouri, Columbia; and **Dr. P. J. Osmundson,** Mayo Clinic, Rochester, Minnesota.

Dr. John Kersten, a member of the board of directors of the Iowa Heart Association presided at the seminar.

In October the Palo Alto Medical Society approved an immunization program for all school children attending school in the county who wished to take part. Immunizations given were smallpox vaccinations, triple toxoid for children under 10 years of age, and diphtheria-tetanus for children 10 years and over.

Dr. Betty Budd joined **Dr. R. C. McGeehon,** of Indianola, in the practice of medicine on October 1. Dr. Budd is a native of Iowa. She graduated from SUI, interned at Mercy Hospital in San Diego, and also took extra training in anesthesiology on the West Coast.

On the advice of the county board of supervisors, the Plymouth County Medical Society "drafted" **Dr. Sherman E. Lindell,** of LeMars, to assume the duties of county medical examiner, an officer who replaces the county coroner, effective January 1, 1961.

Dr. Keith Hughet practiced with **Dr. W. E. Owen,** at St. Ansgar, during the month of October. He was graduated from SUI and interned and served one year of surgery residency in Cleveland, Ohio, and has done general practice in Osage, Iowa, and Tucson, Arizona.

Appointment of **Dr. Ellis Duncan** as deputy Mahaska County coroner has been certified to the board of supervisors for approval by Coroner **Dr.**

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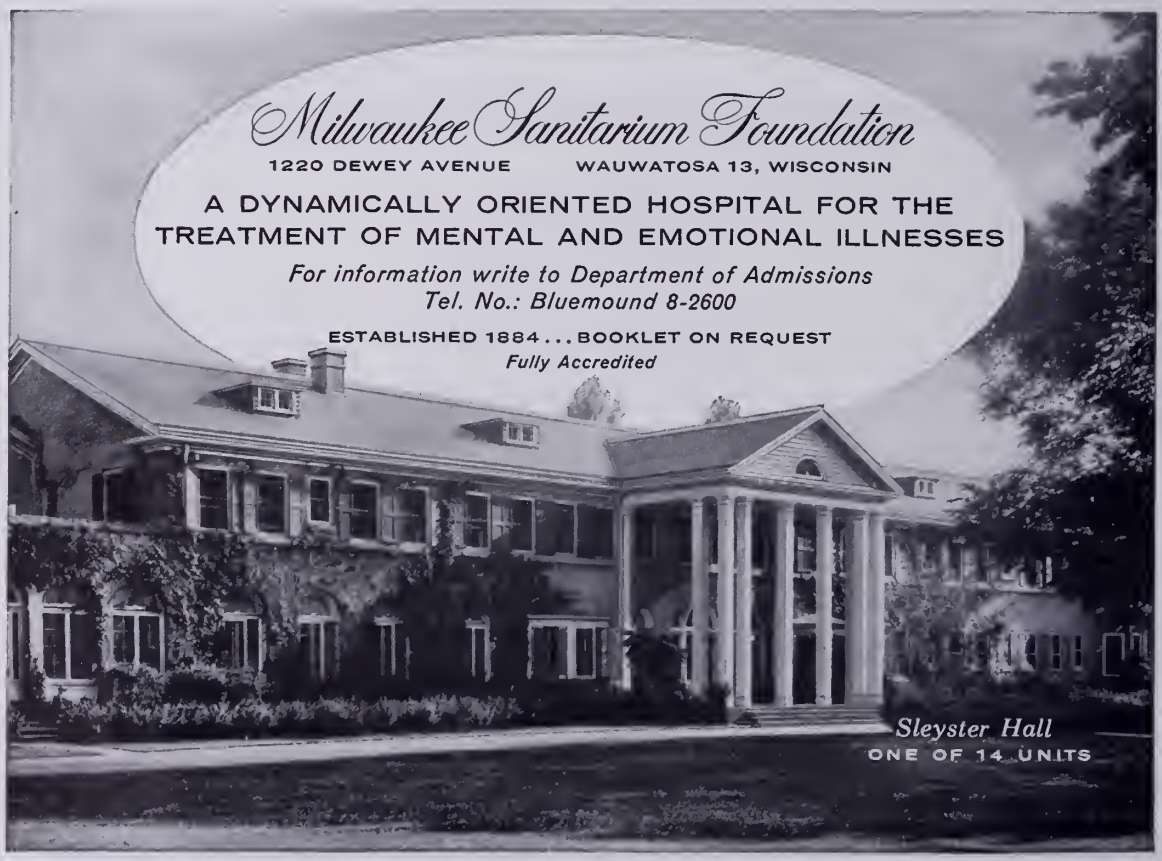
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F. O. W. Voigt, of Oskaloosa. Dr. Voigt, who is nearing the end of a two-year elective term as coroner, has named Dr. Duncan as deputy to serve in the event of his absence from the county. After the first year, the coroner's post will be discontinued and supervisors will name a medical examiner to succeed the coroner in the investigation of violent or unusual deaths under an act by the state legislature.

At the thirteenth annual meeting of the Iowa Division of the American Cancer Society, October 1 and 2 in Cedar Rapids, the following Iowa doctors were elected to key positions: **Dr. Rex Weland,** of Cedar Rapids, is the new vice-president and president-elect. **Dr. Robert W. McConnell,** of Davenport, formerly chairman of the Division's Committee on Professional Information, was elected to the post of chairman of the board, and **Dr. Richard Hastings,** of Ottumwa, was named medical and scientific director succeeding **Dr. John MacGregor,** of Mason City, **Dr. Harold Morgan,** of Mason City, was elected treasurer of the Iowa Division. **Dr. Addison Brown,** of Des Moines, was reelected as chairman of the Division's committee on Public Information and **Dr. Jack Spevak,** of Des Moines, was elected to the chairmanship of the Division's Committee on Service, succeeding **Dr. Richard Birge,** of Des Moines. In addition, **Dr. L. J. O'Brien,** of Fort Dodge, was elected professional delegate representing the Iowa Division at the national level. He succeeds **Dr. Robert C. Hickey,** of Iowa City, in this capacity.

Dr. A. L. Murphy, of Fredericksburg, was elected professional delegate to represent the Third Congressional District, **Dr. J. P. Cogley,** of Council Bluffs, was elected to represent the Seventh Congressional District, and **Drs. Kenneth R. Brown,** of Leon, and **Dr. Harold Husting,** of Oskaloosa, were elected as representatives for the Fourth Congressional District on the board of directors for the Iowa Division of the American Cancer Society.

Dr. and Mrs. William McCormack, of Ames, and their four children, were all injured in a two-car accident which occurred at a county road intersection six miles north of Latimer on Sunday, September 25. A son, William, was fatally injured. Dr. McCormack suffered bruises and shock; his wife received a broken leg; a daughter, Sarah, was cut and bruised, another daughter, Polly, received internal injuries and a son, Donald, received head injuries. The driver of the other car suffered two fractured ribs.



Thirty-eight physicians from Iowa and Illinois attended a postgraduate conference in Burlington on October 12, sponsored by the Iowa Chapter of the American Academy of General Practice and the Des Moines County Medical Society. The two sessions were moderated by executives of the respective sponsoring groups, **Dr. V. L. Schlaser,** of Des Moines, and **Dr. C. J. Lohmann,** of Burlington.

Dr. Alfred Norris, an assistant professor of psychiatry at S.U.I., spoke on "Diagnosis of Depression" and "Treatment of Depression." **Dr. George B. Logan,** an assistant professor of pediatrics at the Mayo Foundation, discussed "Symptomatic Treatment of Asthma in Children" and "Jaundice During the First Few Days of Life." **Dr. John L. McKelvey,** head of obstetrics and gynecology at the University of Minnesota, talked on "Lessons From Maternal Mortality Studies" and "Problems of Recognition and Treatment of Early Carcinoma of the Cervix." The topics on which a Des Moines physician, **Dr. Lawrence Ely,** spoke were "Some Practical Aspects of Fluid and Electrolyte Balance" and "Femoral Hernia."

Dr. Alfredo D. Socarras (Varona) has begun the practice of neurology in Glenwood. He is a 1952 medical graduate of the University of Havana, he interned at Mercy Hospital, Des Moines, from July, 1955, to July, 1957, and since then has been in residency training at the Mayo Clinic.

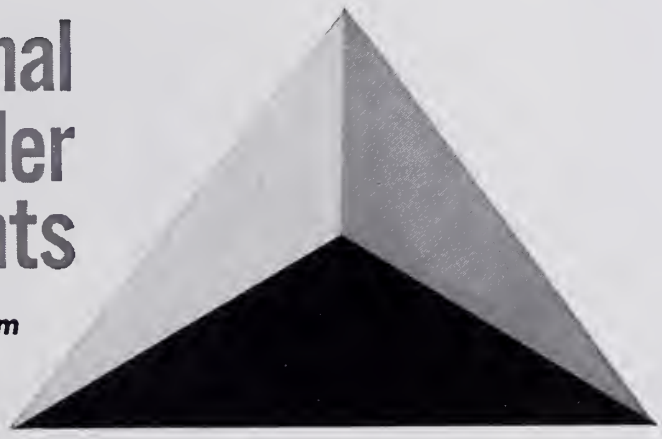
The following were among approximately 1,175 surgeons inducted as fellows by the American College of Surgeons in San Francisco on October 14: **Dr. Arlo L. Pitcher,** Belmond; **Dr. James R. Mincks,** Bloomfield; **Dr. Robert B. Allen,** Burlington; **Dr. Paul Guggenheim,** Council Bluffs; **Drs. Robert J. Foley** and **F. Dale Wilson,** Davenport; **Dr. Raymond Vespa,** Des Moines; **Dr. Robert A. Pfaff,** Dubuque; **Dr. Donald S. Reading,** Marshalltown; **Dr. Herbert L. Wormhoudt,** Ottumwa; **Dr. John S. Hooley,** Sigourney; **Drs. Kenneth M. Keane** and **Anthony H. Kelly,** Sioux City; and **Dr. Rolf F. Kruse,** Waterloo.

THE CLINTON HERALD reported on October 14 that **Dr. James P. Cahill,** a medical graduate of Loyola University who recently completed his internship at Cook County Hospital, Chicago, had agreed to start practice in Preston, occupying the office facilities vacated a few months ago when **Dr. W. C. Zabloudil** moved to Burlington.

Dr. Nelle S. Noble, of Des Moines, has been declared the winner of the 1960 Elizabeth Blackwell Award of the American Medical Women's Association. The award, a bronze medal, is inscribed: "Nelle S. Noble, M.D., a woman physician of great ability and great devotion to the American Medical Women's Association." Dr. Noble retired in 1949 after practicing 40 years in Des Moines. **Dr. Elizabeth Blackwell** was the first woman to receive an M.D. degree from an American medical school (1849).

Dr. H. L. Brenton, of Mason City, has been ap-

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pointed to lead a diabetes-detection drive in his area during Diabetes Week, November 13-19. He was chosen by **Dr. George Tice,** president of the Cerro Gordo County Medical Society.

DEATHS

Dr. Howard W. Barbour, 82, of Mason City, died Saturday, September 24, at his home. He practiced in Mason City for more than 40 years, was a member of the Cerro Gordo County Medical Society, and became a 50-Year Club member of the Iowa State Medical Society in 1953.

Dr. John Wesley Morrison, 82, died September 18 at Alta Memorial Hospital, Alta, Iowa. He had practiced in Alta for 55 years during which time he had served as city health officer and member of the board of education and was instrumental in the founding of the Alta Community Hospital in 1912. During World War II he served as county examiner for the army and navy. He was a past president of the Buena Vista County Medical Society, and a member of the Iowa State Medical Society and various local organizations.

Dr. Robert A. Evans, 87, died September 19 at the home of his daughter in Sioux Falls, South Dakota. Dr. Evans had practiced for 31 years at Algona, Iowa, before his retirement in 1947, and during those years he had also served as Kossuth County coroner.

Dr. Walter J. Connell, former head of the city health department in Dubuque, died Thursday, October 6, at the Veterans Administration Hospital in Tomah, Wisconsin.

BABIES SHOULD BE UPRIGHT WHEN BOTTLE-FED

Babies should be bottle-fed in an upright position during the first three months of life to prevent ear infections, Dr. R. Bruce Duncan, of Wellington, New Zealand, has warned in the October issue of AMA ARCHIVES OF OTOLARYNGOLOGY.* "A supine position of an infant while bottle feeding is a predisposing factor in inflammations of the middle ear cleft," he explains.

The deposition of milk in the cleft results from a sudden gush of milk from the bottle, which the baby cannot always prevent from entering the postnasal space and nose. This problem, in Dr. Duncan's opinion, persists because no bottle-nipple combination has yet been devised that can adapt perfectly to the infant's needs. On the other hand, a mother's breast is adaptable, and it is uncommon to hear of, or observe, this ear infection in a totally breast-fed baby.

Dr. Duncan says he believes ear infections caused by milk are "a frequent type" of middle-ear

* Duncan, R. B.: Positional otitis media. ARCH. OTOLARYNG., 72:454-463, (Oct.) 1960.

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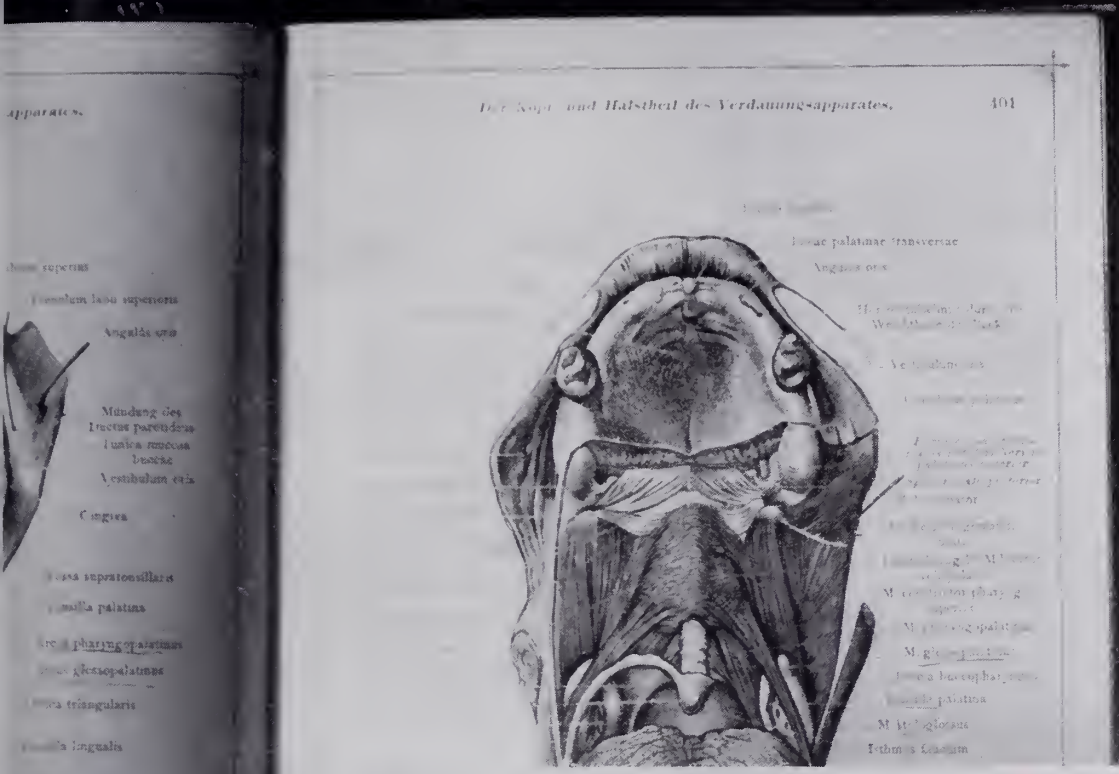
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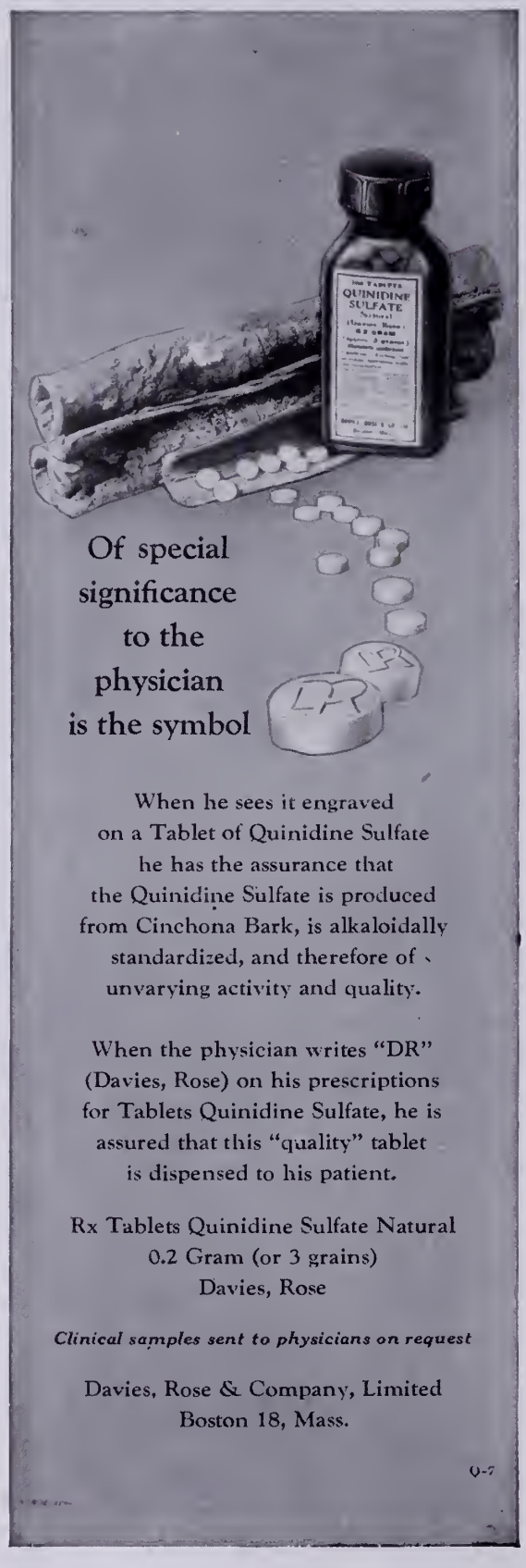


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infections in bottle-fed infants. "Reflux of milk into the postnasal space can occur in any position in which the child is held, but this is probably a very minor cause of middle-ear inflammation when the upright position is used," he says.

He recommends upright bottle-feeding for:

—Babies up to the age of three months

—All infants in hospitals

—All premature infants

—Babies whose noses are blocked by allergies or by bacterial or virus infections

—Older infants having inflammations of the middle ear.

The New Zealand physician's recommendations were based upon a survey of 242 babies.

MECHANISM AND CONTROL OF NAUSEA AND VOMITING

The release of a new medical film, "The Mechanism and Control of Nausea and Vomiting," was announced in mid-October by Smith, Kline & French Laboratories. It is available on a free-loan basis for showings to professional audiences through the firm's local representatives.

The 21-minute color film is said to be based on the last 10 years' findings regarding the neurological mechanisms involved in the phenomena. It employs fluoroscopy and animation to review some of the disease states that cause vomiting, and illustrates the roles of the gastrointestinal, respiratory and central nervous systems in emesis. In addition, it describes the pharmacological rationale for the use of phenothiazine drugs in the control of vomiting, and discusses those drugs as antiemetic agents in therapy.

The animated portions of the film employ renderings of classical medical illustrations, ranging from medieval woodcuts by Michelangelo—designed for texts of Vesalius—to the copper plates of Sobotta—prepared for the original editions of GRAY'S ANATOMY in the early part of the Nineteenth Century.

FORENSIC SCIENCE TRAINING

At the Second Forensic Sciences Symposium, presented on November 8-10 in Washington, D. C., by the Armed Forces Institute of Pathology, the program will include panel discussions of "Drug Addiction," "Instrumental Deception Detection," "Forensic Pathology Cases" and "Some Problems in Forensic Sciences," as well as a number of formal papers on various aspects of criminal investigation.

On January 23-27, 1961, the Armed Forces Institute of Pathology will present a formal post-

(Continued on page lxxxi)

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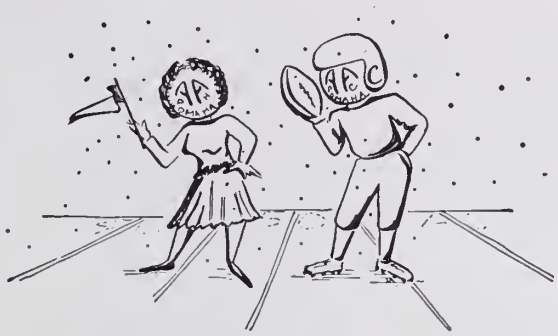
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graduate short course in "Forensic Pathology," in Washington. The course will be designed to familiarize military and civilian pathologists with the problems of legal medicine and the role of the general pathologist in the solution of such problems. The material will be presented by specialists in the field of legal medicine through lectures and discussions, slide reviews, movies and closed-circuit TV.

EVALUATIONS OF SUNTAN PREPARATIONS

Two separate studies of the effects of suntan-producing lotions and one study of the effects of suntan pills appeared in the October issue of AMA ARCHIVES OF DERMATOLOGY.*

As for the lotions, both groups of researchers report that they are harmless. The fluid tested was "Man-Tan," which is typical of the tanning lotions containing dihydroxyacetone (DHA), and is capable of tanning human skin without exposure to the sun. Drs. Saul Blau, Norman B. Kanof and Louis Simonson, of New York City, say that DHA produced no inflammatory reaction during 30 days of use, but point out that it offers users no protection from the ultraviolet rays of the sun. Drs. Howard I. Maibach and Albert M. Kligman, of Philadelphia, say that their study showed that "the material appears innocuous." Both groups reported some success in using the lotion to treat conditions in which areas of the skin had lost their natural color.

Suntan pills containing methoxsalen, Drs. J. Donald Imbrie, Lester L. Bergeron and Thomas B. Fitzpatrick declare, should be used solely for medical rather than cosmetic reasons, and should be taken only under the direction of a physician. Reporting on a study of 40 persons, they say: "Methoxsalen increases the suntanning response in normal men and women. No unpleasant side-effects or servere burning occurred in our subjects because all subjects followed a sun exposure guide. This guide suggests graduated increments of solar exposure. There is now enough evidence to make a claim that methoxsalen can accomplish an increase in solar tolerance. Methoxsalen is advocated as an orally administered drug to increase the tolerance of skin to sunlight in individuals who do not have adequate natural protective mechanisms.

Methoxsalen, introduced in 1953, enhances the dark color in the skin. Oral administration of the drug decreases the redness of the skin resulting from the sun's rays. But application to the skin increases this reaction.

* Blau, S., Kanof, N. B., and Simonson, L.: Dihydroxyacetone (DHA): keratin coloring agent. ARCH. DERMATOL., 82:501-504, (Oct.) 1960.
Maibach, H. I., and Kligman, A. M.: Dihydroxyacetone: suntan-stimulating agent. ARCH. DERMATOL., 82:505-507, (Oct.) 1960.
Imbrie, J. D., Bergeron, L. L., and Fitzpatrick, T. B.: Follow-up study of effect of oral methoxsalen (8-Methoxypsoralen) on sunburn and suntan. ARCH. DERMATOL., 82:617-620, (Oct.) 1960.

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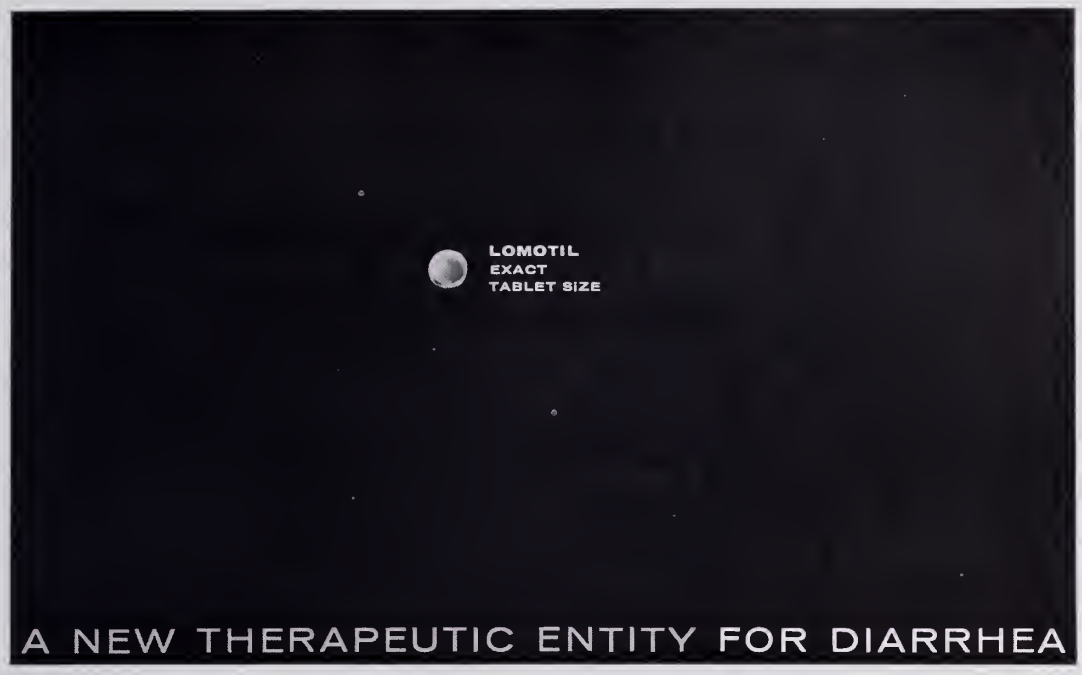
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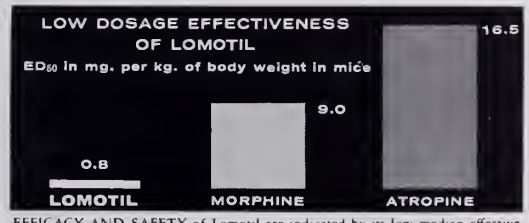
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The Month in Washington



Washington, D.C.—Election of Sen. John F. Kennedy as President made it probable that the issue of providing health care for the aged under Social Security again will be raised in Congress next year.

Kennedy will go into the White House pledged "to the immediate enactment of a program of medical care for the aged through Social Security." His intentions present a serious challenge to the nation's physicians who have vigorously opposed use of the Social Security system to provide health care for the aged.

Kennedy's program would provide what he described as "a life policy of paid-up medical insurance" for older persons. "It would provide them hospital benefits, nursing home benefits and x-rays and laboratory tests on an outpatient basis," he said in his campaign for the Presidency.

He said the Kerr-Mills legislation enacted into law last summer is inadequate. The medical profession supports this federal-state program to provide health care for needy and near-needy aged persons. In approving the Kerr-Mills program, Congress rejected the Social Security approach espoused by Kennedy and union labor leaders.

Kennedy's medical program also included: federal grants for construction, expansion and modernization of medical, dental and public health schools; federal loans and scholarships for medical students; federal grants for renovating older hospitals; increased federal financial support for medical research, including basic research; and expansion of federal programs for rehabilitation of handicapped or disabled persons.

* * *

Food and Drug Administration employees have been cleared of conflict-of-interest charges brought up in the Senate Antitrust and Monopoly Subcommittee's investigation of the drug industry.

A three-member investigating group appointed by Arthur S. Flemming, Secretary of Health, Education and Welfare, examined the financial records of 900 FDA employees. The special investigators then reported: "On the basis of all the evidence before us, it is our judgment that there are no present employees of the FDA whose sources of personal income are incompatible with their government employment."

The investigators continued to analyze "a mass of fact and opinion" in connection with charges that there has been too close a relationship between some FDA employees and the drug companies which they check for conformance to government regulations. The investigators anticipated that their final report would show the possibility of organizational or procedural improvements in the FDA.

The charges were triggered by disclosure at the Subcommittee investigation that Dr. Henry A. Welch, director of the FDA's Antibiotics Division, had received $287,000 over eight years as a writer and editor for antibiotics publications. After the disclosure, Flemming ousted Welch from the government post.

* * *

The Federal Children's Bureau reported that the infant death rate in the United States has declined since 1958, but still shows the effect of a 1957-58 setback.

There was a steady decline in U. S. infant deaths during the 1950's, but increases in 1957 and 1958. Since then, the infant death rate has headed downward again but still hasn't made up the lost ground, even though the provisional rates for 1959 (26.4 deaths of infants under one year old per 1,000 live births), and the first half of 1960 (25.9 per 1,000) showed improvements.

In 1915, when data were first gathered on infant mortality in this country, the rate was 99.9 per 1,000. By 1940, this had been cut to 47, and by 1950 it had been reduced to 29.2. An all-time low of 26

was registered in 1956. The rate edged up to 26.3 in 1957 and to 27.1 in 1958.

According to the 1959 United Nations Demographic Yearbook, nine other countries reported lower infant mortality rates than did the United States in 1958. They were: Sweden 15.8, Netherlands 17.2, Australia 20.5, Norway 20.5, Switzerland 22.2, United Kingdom 23.3, Denmark 23.4, New Zealand 23.4 and Finland 24.5.

Russia reported a rate of 81 in 1950 and 40.6 in 1957, the latest year for which data were reported.

* * *

Persons with heart and blood vessel diseases have been urged to consult their physicians about routine vaccination against influenza.

In a joint statement, the American Heart Association and the National Heart Institute of the U. S. Public Health Service said, "Evidence of the past three years abundantly confirmed that dangers of influenza are much greater for patients with heart or lung disease than for others." The risk was described as "particularly high for those with lung congestion due to heart disease."

The joint statement added that three recent influenza epidemics had "again emphasized the fact that individuals with cardiovascular or pulmonary disease are more susceptible to the hazards of influenza than is the general population." The epidemics were in the fall of 1957, the spring of 1958 and early this year.

The increased risk was shown both by more severe illness and by higher fatality rates among patients with heart and blood vessel disease, the statement said.

The Association and the federal agency said influenza virus vaccine had been shown "of definite value" in preventing the disease. Side reactions were reported as "extremely few."

GRANTS FOR RESEARCH ON CHEST DISEASES

The Medical Research Committee of the Iowa Trudeau Society will accept applications until February 1, 1961, for research grants in the areas of tuberculosis, respiratory physiology and associated fields. Funds for research projects within Iowa are provided on a voluntary basis by county tuberculosis associations through the Iowa Tuberculosis and Health Association.

Dr. Kenneth R. Cross, of Iowa City, is chairman of the Medical Research Committee, and the other members include Dr. Lewis J. Dimsdale, of Sioux City, Dr. Jack M. Layton, of Iowa City, and Drs. Ralph H. Heeren and Daniel F. Crowley, both of Des Moines. Application forms may be secured from the Trudeau Society's headquarters at 2124 Grand Avenue, Des Moines 12.

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Personals



The Scott County and Rock Island County Medical Societies' Seminar sponsored by the Lederle Company is to be held at the Blackhawk Hotel, in Davenport, on December 7, 1960. Speakers for the seminar will be **Dr. Alan P. Thal,** associate professor of surgery at the University of Minnesota, whose topic will be "Surgery of Coronary Artery Disease" and **Dr. Tague A. Chisholm,** also of the University of Minnesota, who will speak on "Surgical Diseases of Children, Particularly Tumors."

Mr. William F. Poorman, president of the Central Life Assurance Company, Des Moines, has been appointed to serve a four-year term on the National Advisory Heart Council, effective October 1, 1960. Mr. Poorman is also vice-chairman of the Advisory Board of Mercy Hospital in Des Moines, chairman of the Governor's Committee for Employment of the Physically Handicapped, chairman of the Committee on Employment, Iowa Commission for Senior Citizens, and a member of the Board of Directors of Iowa Blue Shield.

As a member of the National Advisory Heart Council, Mr. Poorman will make recommendations to the Surgeon General of U.S.P.H.S. on programs of the National Heart Institute, established by Congress through the National Heart Act in 1948.

Dr. Robert Perry Soiseth, a general practitioner, has joined Medical Associates, in Waterloo. Dr. Soiseth is a graduate of SUI and completed two years of military service in August of this year.

Dr. Lynn Frink, of Reinbeck, plans to move to Southern California around the first of the year, where he will take up speciality training.

Dr. P. V. Janse, of Algona, received his 50-year pin from the ISMS in late October. He has spent almost all of his professional career in Lu Verne and Algona.

Some 150 doctors and lawyers attended the third annual medical-legal seminar, held at Fort Dodge, October 26, under the co-sponsorship of the Web-

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THE AMERICAN CANCER SOCIETY

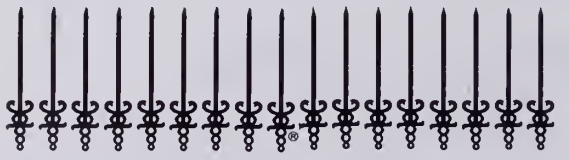
is dedicated to saving lives from cancer and spearheads the fight against cancer quackery. Its Committee on New or Unproved Methods of Treatment of Cancer has a membership of physicians, lawyers, educators, and public relations specialists. This committee has been a prime mover in developing constructive action

against cancer quackery

Inspired by model legislation formulated by this committee with the active cooperation of the California Medical Association, California, Kentucky and Nevada recently passed bills providing the first effective means of fighting cancer quackery at its base of operations—in the local community.

To keep both the public and the medical profession informed, the Society has established, in its national office, a central repository of material on new or unproved methods of cancer diagnosis, treatment and cure—a principal source of such information in this country.

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ster County Bar Association and the Webster County Medical Society.

During the afternoon session, **Dean Frederick Lewis,** of the University of Kansas City's school of law discussed "Important Relationships Between the Professions" and led a panel discussion on "Inter-Professional Problems and Solutions" which dealt with such subjects as medical records and how they figure in legal cases, and various methods of producing medical evidence in courts.

The evening program consisted of the medical-legal film "A Matter of Fact" contrasting the coroner system with the medical examiner system, and another panel discussion on "The Impartial Medical Witness." This discussion centered on the technic now being tried in several states whereby the court appoints a medical examiner to conduct an investigation and give impartial testimony, rather than rely solely on the testimony of plaintiff or defendant in a case.

Dr. O. N. Glesne, of Fort Dodge, president-elect of the Iowa State Medical Society, moderated the evening panel session.

Building of the new South Ottumwa Medical Center is in progress. When it is completed it will provide ample office space for **Drs. Phil McIntosh, William Maixner, Robert Dalager** and **Reynold Maixner.**

Dr. Edward H. Rynearson, of the Mayo Clinic, presented a paper at the Scott County Medical Society meeting on November 1 at the Outing Club at Davenport. His paper entitled "Psychiatric Aspects of Endocrinology" was, in a sense, a preview of a book on the same subject which Dr. Rynearson is writing with another Mayo doctor.

Two Davenport suregons have received special honors from the International College of Surgeons. **Dr. Leo Miltner** has been made a vice-regent in orthopedic surgery and **Dr. R. V. Daut** a vice-regent in the section of urology for the State of Iowa.

Dr. W. S. Chester, of Albia, underwent major surgery October 17 at an Ottumwa hospital.

Two Dubuque physicians, **Dr. William Province, Jr.,** and **Dr. Kenneth K. Hazlet,** were among more than 5,000 persons who attended the American Heart Asociation annual meeting and scientific sessions at St. Louis, October 14-16. Dr. Province is president-elect of the Iowa Heart Association and Dr. Hazlet is chairman of the Dubuque County Heart Committee.

Speaking at the annual banquet sponsored by the Bloomfield Lions Club and Rotary Club, in

conjunction with the Davis County Heart Association, **Dr. Herman J. Smith,** a Des Moines cardiologist, said that the launching of the Russian Sputnik three years ago brought a clamor for more and better trained scientists in all areas, including heart research. But Dr. Smith stated that "this is the first time in the history of the United States that lack of man-power, not money, was the prime block to progress."

In his talk Dr. Smith described some of the research projects now going on in Iowa. They involve the study of blood flow in normal and diseased blood vessels; the search for blood substitutes; studies on blood clotting; the attempt to devise a method by which the heart beat could be stopped during surgery, then restored; the effect of inhaling cold air on circulation through the lungs; and a study on the effect of tranquilizers on the cholesterol in the blood of animals.

Dr. and Mrs. Rudolf Selo, of Council Bluffs, have returned from a five-week tour of Europe where Dr. Selo attended the World Medical Association meeting in Berlin. While there, they made several trips to East Berlin, Dr. Selo's birthplace.

Dr. H. H. Harris and **Dr. Thomas L. Coriden,** of Sioux City, were credited with saving the life of a baby by performing a caesarean operation on the mother after she had been fatally wounded by the accidental discharge of her husband's shotgun. The baby was given mouth-to-mouth and conventional respiration, and was then rushed to Methodist Hospital, in Sioux City, where it was reported in good condition. The infant's father, **Dr. Jack G. Clapsaddle,** is a specialist in children's dentistry.

Dr. Irving Ringdahl, the former Roland physician, will begin a joint practice in Nevada, Iowa, with **Dr. Merton Johnson** early next summer after completing a surgical internship at Dubuque.

Dr. Billy Grimmer, of Grinnell, spoke to the members of the Poweshiek County Association for Retarded Children on October 19 at the Methodist Church in Malcolm. He spoke on diseases to which retarded children are susceptible.

Belief that clinics can play an important part in statistical research was expressed by **Dr. William R. Bliss,** of Ames, at the convention of the American Association of Medical Clinics in New Orleans, during the first week in October.

Dr. Bliss, who is connected with the McFarland Clinic, said that in his opinion a clinic can do a better job than a medical school in statistical research, evaluation and follow-up because of the closer tie between doctors and patients. He also

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advocated association-wide studies of cardiovascular disease and care of the aged.

Drs. Hans Zellweger and **John MacQueen**, professors of pediatrics at SUI, were speakers at the opening sessions of the seventh annual meeting of the Iowa Dermatological Society at the SUI Medical Center, October 14 and 15.

Officers of the society are **Dr. Robert L. Barton**, Dubuque, president; **Dr. Donald A. McEleney**, Cedar Rapids, vice-president; and **Dr. Robert G. Carney**, professor and acting head of the SUI Department of Dermatology, secretary-treasurer.

A community service award was given posthumously to the late **Dr. N. Schilling** by the Rotary Club of New Hampton at its fifth community service award dinner and program, on Thursday evening, October 13. The citation was accepted by Dr. Schilling's daughter, **Mrs. John Caulfield.** Dr. Schilling died in 1945 at the age of 77, after long years of service to his community and his ultimate success in obtaining a hospital for the town.

In its efforts at interesting high school students in medical careers, the Union County Medical Society is sponsoring a Future Doctors' Club in Creston. At the first meeting of the group, on October 19, the Iowa Heart Association's kinescope "Intruders in the Life Stream" was shown. **Dr. H. J. Peggs** has said "We thought it was very good indeed because it not only placed needed emphasis on basic research, but showed the interrelationship of the various sciences in answering the simple question 'How does the reticulo-endothelial cell know that a bacterium is a bacterium?'" A further meeting of the new organization is to be held this month.

The November meeting of the Polk County Medical Society was held at the Firestone Tire and Rubber Company. The speaker of the evening was **W. L. Hogue, Jr., M.D.**, of Akron, Ohio, whose subject was "Calling Dr. X—To Help Reduce the Swelling Costs of Health Insurance."

The December meeting of Polk County Medical Society will be held December 21, at Iowa Methodist Hospital, Des Moines. Dinner will be at 6:30 p.m. The subject to be presented by a speaker as yet unannounced will be "A Report on Research on Cardiovascular Response to Exercise."

The Annual Meeting of the Polk County Medical Society will take place on January 18, at the Golf and Country Club, Des Moines. Dinner at 6 p.m.

Mr. John J. Powers, public relations director and legal counsel for the Sisters of Mercy, Detroit, Michigan, spoke to the members of the Woodbury County Medical Society on November 17 at the



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Vitamin A	1,500 USP units
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Thiamine Mononitrate (B_1)	1 mg.
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Sheraton-Martin Hotel, Sioux City. His subject was "Doctor, Patient, Hospital and Law."

The Scott County Medical Society held its annual election Tuesday evening, November 1, 1960. Officers for the new year will be **Atlee B. Hendricks, M.D.**, president-elect; **F. R. McFadden, M.D.**, vice-president; **T. W. McMeans, M.D.**, treasurer; **Joseph L. Kehoe, M.D.**, secretary. **Dr. Robert A. Towle** will be installed as president on January 3, 1961. **Dr. J. H. Sunderbruch** and **Dr. Preston Gibson** were re-elected delegates for a two-year period.

The first annual seminar in psychiatry for general practitioners was held at the Mental Health Institute in Independence on October 6 and 7. The Iowa Chapter of the American Academy of General Practice allotted 8½ units of Category I credit to those who attended.

Fifty-six physical therapists from Iowa and nearby states attended the third annual rehabilitation seminar for physical therapists October 14 and 15 at the SUI College of Medicine. The seminar was sponsored by the Iowa Chapter of the American Physical Therapy Association and the SUI Division of Physical Medical and Rehabilitation Graduate Program in Physical Therapy.

Dr. W. D. Paul, professor and medical director of the rehabilitation unit at SUI, gave the welcoming address and **Mr. Loren Hickerson,** executive director of the Iowa Alumni Association, spoke before the group at a dinner Friday night. Other speakers at the seminar were **Dr. Carroll B. Larson,** professor and head of orthopedic surgery; **John Leabhart,** clinical instructor in orthopedic surgery; **Dr. Maurice Van Allen,** associate professor of neurology; **Dr. Michael Bonfiglio,** associate professor of orthopedic surgery; and **Dr. G. W. Howe,** of Mercy Hospital, Iowa City.

Dr. Morris G. Sloan has joined the Boone County hospital staff as a radiologist. He received his medical degree from SUI, served his internship at the Edward W. Sparrow Hospital in Lansing, Michigan, served two years in the Army Medical Corps and finished his residency at Iowa Methodist Hospital, in Des Moines, on October 1, 1960.

Dr. Leonard H. Boggs, of Sioux City, was recently elected to the American College of Obstetricians and Gynecologists. He is a graduate of Creighton University Medical School and served his internship at St. Joseph Mercy Hospital in Sioux City. After two years' service with the Air Force, Dr. Boggs served a three-year residency in obstetrics and gynecology at the University of

Louisville. He has been in private practice for about 18 months.

Dr. D. C. Koser, of Cherokee, has obtained a building permit to construct a nursing and custodial home there to be called Hilltop House. It will be leased and operated by the Gregg Nursing Homes of Cherokee. The one-story brick veneer structure will contain rooms for 17 patients.

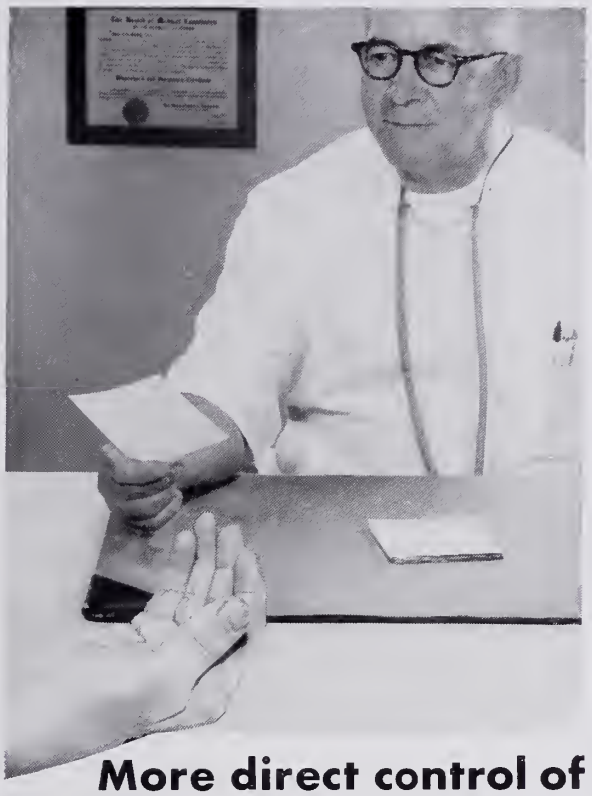
Iowa high school students and teachers got some helpful suggestions on the selection and preparation of projects for entry in the 1961 Hawkeye Science Fair at a special "how-to-do-it" meeting at Drake University on October 22. **Joan Wallace**, of Roosevelt High, Des Moines, winner of the 1960 Fair's biological sciences division, and **Mike Baughman**, of Indianola, second in physical sciences, showed their exhibits and told of the study and preparation that went into them.

Additional tips on exhibits were given by **Dean C. Stroud**, director of the fair and instructor at Amos Hiatt Junior High School. **Dr. John G. Thomsen**, of Des Moines, representing the Medical Society, spoke on "Medical Careers."

The first Northeast Iowa Clinical Conference was held October 20 at the Masonic Temple, Waterloo. Participants in the program heard the following lectures which were interspersed throughout the day's activities. "Mutual Respect and Balance in Parent-Child Relationships," **Dr. W. Hugh Missildine**, associate professor of pediatrics and psychiatry, Ohio State University; "Management of Complications of Myocardial Infarction," **Dr. George Griffith**, professor of medicine and cardiology, University of Southern California; "Treatment of Complications of Fractures of the Neck of the Femur," **Dr. Michael Bonfiglio**, associate professor of orthopedics, SUI; "Treatment of Burns of the Upper Extremities," **Dr. William Stromberg**, associate professor of orthopedic surgery, Northwestern University, Chicago; "Surgical Versus Radioactive Iodine Treatment of Hyperthyroidism," **Dr. David Hoffman**, consultant in endocrinology, Mayo Foundation, Rochester; "Malignancy of the Female Pelvis," **Dr. James Hunter**, consultant in obstetrics and gynecology, Mayo Clinic, Rochester.

Among five new members of the Medical Advisory Board of the Sears-Roebuck Foundation recently approved by the AMA Board of Trustees, is **Dr. Robert N. Larimer**, of Sioux City, representing the Midwest territory.

The regular scientific meeting of the Cerro Gordo County Medical Society took place December 13 at the Hanford Hotel, Mason City. **Dr. Carroll**



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SANDOZ

B. Larson, of the Department of Orthopedic Surgery at SUI, spoke on "Recent Advances in the Treatment of Fractures."

Dr. E. J. Hertke, has joined **Drs. D. A. Glomset, C. H. Gutenkauf, H. J. Smith** and **S. J. Zoeckler** in the practice of internal medicine in Des Moines. He is a graduate of the University of Illinois, interned at Cook County Hospital in Chicago, took his residency in internal medicine at the VA hospital in Hines, Illinois, and served two years in the U. S. Navy.

Dr. Dean Goplerud, a resident physician in the Department of Obstetrics and Gynecology at SUI, has received a $100 top award for a research paper he read at a scientific meeting in Chicago in November.

His paper, which was judged the best presented by a resident physician in the Junior Fellow Division at the annual district meeting of the American College of Obstetricians and Gynecologists, was entitled "Carcinoma of the Vulva: A Study of 135 Cases at the SUI Hospitals."

Dr. Hanley F. Jenkins, recently a surgical resident at Iowa Methodist Hospital, will enter private practice soon with offices in the Bankers Trust Building, in Des Moines.

The Iowa Heart Association has granted a total of $5,360 to staff members at Iowa Methodist Hospital, Des Moines, for research. **Dr. William Myerly** will conduct two projects: (1) Pumping support for the ailing heart, and (2) anoxic arrest with intermittent coronary perfusion. **Dr. John Gustafson** will continue his research on (3) electrocardiographic changes of small infants.

A postgraduate medical conference sponsored jointly by the Webster County Medical Society and the Iowa State Medical Society was held Thursday, December 1, at the Warden Hotel, Fort Dodge. **Dr. R. O. Swann,** of Fort Dodge, served as moderator and **Dr. Don G. Bock,** Fort Dodge, gave the welcoming address. The scientific speakers and their topics were **Dr. Parker Hughes,** Des Moines, "The Obstetrician and Gynecologist"; **Dr. M. S. Lawrence,** SUI College of Medicine, "Cardiovascular Conditions Amenable to Surgery"; and **Dr. G. R. Diessner,** Mayo Clinic, "Advances in the Field of Rheumatology."

The Buchanan County Medical Society held its regularly scheduled scientific meeting Wednesday,

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Board of Surgery Review, Part II, Two Weeks, May 15
Gynecology, Office & Operative, Two Weeks, February 20
Vaginal Approach to Pelvic Surgery, One Week, January 30
Obstetrics, General & Surgical, Two Weeks, April 3
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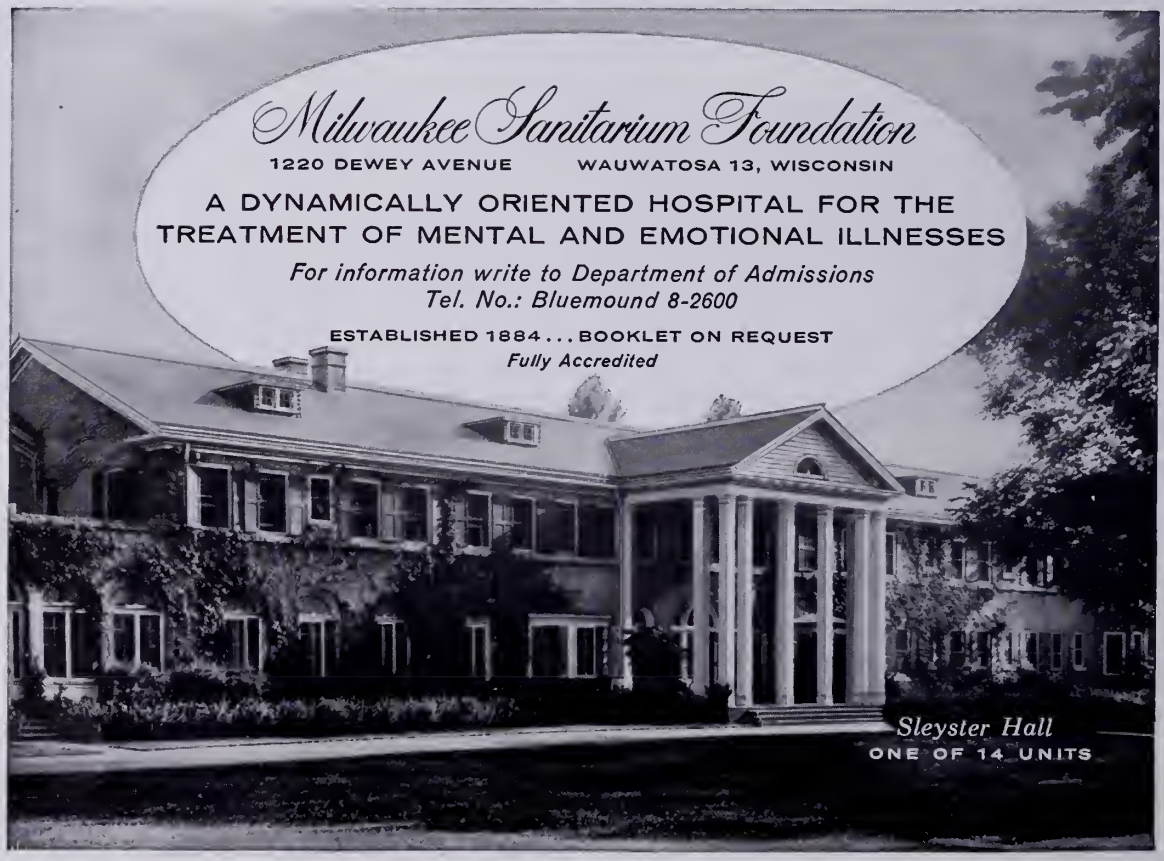
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November 9, at the Pinicon Hotel, Independence. Following the dinner and business discussion, **Dr. Richard C. Mitchell,** of Waterloo, spoke on "Erythroblastosis fetalis."

Yearly elections to select Buchanan County Medical Society officers will be held December 14.

The Black Hawk County Medical Society will hold a business meeting Tuesday, December 20, 7 p.m., at the Elks Club, Waterloo.

Mrs. Geraldine M. Smith, of Iowa City, has been elected to the Board of Trustees of the American Association of Medical Assistants. Mrs. Smith has been employed as secretary-office manager for **Drs. Edward W. Paulus, William B. Goddard** and **Thaddeus T. Bozek,** for eleven years. She was charter president of the Iowa City District Association in 1956, and president of the Iowa Association of Medical Assistants in 1958.

DEATHS

Dr. David T. Nicoll, 94, of Mitchellville, a practicing physician for 67 years, died October 29 at Iowa Lutheran Hospital, Des Moines. Dr. Nicoll received a citation from Governor Herschel C. Loveless in 1958, for "outstanding community service."

Dr. Joseph E. Flynn, 47, head of the pathology department at Missouri University, Columbia, died there Sunday, October 23. A native of Dubuque, he was a graduate of the University of Iowa College of Medicine.

Dr. William P. Hofmann, 68, a Davenport eye, ear, nose and throat specialist, died unexpectedly at his home on October 23.

Dr. Robert J. Neufeld, 45, of Davenport, died at Mercy Hospital, Chicago, on November 11. He entered the hospital three weeks ago.

SPEAKERS' BUREAU SCHEDULES

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Factitial Enteritis: An Unusual Cause of Intestinal Obstruction, Chronic Blood Loss Or Malabsorption Syndrome

WILLIAM G. SAUER, M.D.

ROCHESTER, MINNESOTA

INTERMITTENT, incomplete obstruction of the small intestine, an entity encountered not infrequently in everyday practice, is often caused by adhesive bands, hernias, intussuscepting and polypoid tumors, inflammatory disease of the small intestine and congenital anomalies. Acute or chronic loss of blood from the small intestine is usually associated with an ulcerating process, tumor, Meckel's diverticulum, or regional enteritis. The malabsorption syndrome, consisting of steatorrhea, loss of weight, diarrhea, abdominal cramps, tetany, hypoprothrombinemia and so forth may be primary, as in the sprue syndrome, or secondary to some other process such as pancreatitis, regional enteritis, Whipple's disease, lymphoma or disease of the biliary tree.

The purpose of this presentation is to call attention to the fact that any of these entities—intermittent obstruction of the small intestine, hemorrhage or the malabsorption syndrome—may be produced by another process, namely actinic or factitial enteritis.

Radium or x-ray irradiation for carcinoma of the cervix occasionally damages the gastrointestinal tract. Damage under such circumstances is justified by the efficacy of the treatment administered, and its occasional occurrence must be assumed as a calculated risk. The term *actinic or factitial enteritis* designates the chronic inflammatory process in a segment of small bowel that has been damaged by irradiation.

Dr. Sauer is a member of the staff in the Section of Medicine at the Mayo Clinic and Mayo Foundation, the latter of which is a part of the Graduate School of the University of Minnesota.

PREVIOUS OBSERVATIONS

In 1931, Desjardins[1] wrote that the sensitivity of the intestine of animals to direct irradiation is greater than that of the stomach, and that doses of roentgen or radium rays beyond the limit of physiologic tolerance may cause slight or pronounced functional or organic disturbances in the bowel. He noted that the small intestine is more sensitive than the colon, and that the duodenum and jejunum are the most susceptible portions of the small bowel. He stated that the clinical disturbances caused by excessive irradiation of the bowel constitute a specific reaction which, although of the same general character as the common nonspecific reaction known as radiation sickness, differs essentially from it, and is a separate and distinct process.

Many instances of such effects of irradiation on the gastrointestinal tract have been reported. Warren and Friedman,[2] in 1942, commenting on the effects of radiation on normal tissues, stated that ulceration is the fundamental process in radiation enteritis. The ulceration may be irregular and generalized, but more often is discrete and focal. Progressive destruction leads to perforation and fistula formation. Progressive cicatrizing lesions lead to stenosis and obstruction. They expressed the opinion that "delayed" reactions seldom are pure radiation lesions, but that trauma and in-

fection play roles in their evolution and progression. They stated that "delayed" reactions are more frequent than are immediate ones, and that they are essentially ulcerative processes and the sequelae of ulceration. They estimated the incidence of these reactions at from one to five per cent, and said that most of the lesions occur in the rectum and sigmoid, although other portions of the bowel such as the cecum may be involved. They indicated that lesions of the ileum make up a small proportion of the total lesions of the gastrointestinal tract. They pointed out the importance of the relation of previous surgical procedures to damage done to the intestinal tract by irradiation, and the relation of tumor infiltration of the intestine to damage by irradiation. They stated that the significance of adhesions in producing this damage cannot be denied, but that immobilization of a loop is not an absolute prerequisite for the development of a lesion.

In 1935, Jones[3] presented seven cases in which intestinal complications had resulted from prolonged x-ray and radium irradiation for malignant conditions of the pelvic organs. Two of the seven patients suffered from obstruction of the small intestine, and five had sigmoidal obstruction. He emphasized the need for differentiation of this condition from symptoms due to recurrence or metastasis, and the need for exploration to determine the exact cause of the situation and to avoid needless deaths.

Waterman and Tracy,[4] in 1948, listed five groups of complications following irradiation treatment of carcinoma of the cervix: (1) immediate mortality, (2) fistula formation, (3) urinary complications, (4) intestinal complications and (5) severe inflammatory reactions. Among the intestinal complications encountered were ulcers and obstructions of the small intestine in three cases, ulcer of the rectum and sigmoid in 10, perforation of the sigmoid in two, perforation of the transverse colon in one, rectovaginal fistula in 22, and severe intestinal injuries in 38 of the 489 cases reviewed.

Wiley and Sugarbaker,[5] in 1950, reported nine instances of factitial enteritis severe enough to attract clinical attention in 600 cases of irradiation therapy reviewed. Seven of the nine patients reached a stage of partial or complete intestinal obstruction, one had an enterovesical fistula, and one remained under conservative treatment for the factitial enteritis. The shortest interval in their series was five months, and the longest interval was 60 months. They pointed out that roentgenotherapeutic damage in the small intestine constitutes a progressive disease. As the illness progressed, evidence of malnourishment, loss of weight, anemia and, in some instances, hypoproteinemia developed in their patients. At operation or necropsy, the bowel had lost its luster and was thick-walled. Obstruction, when present, usually involved the distal part of the ileum, with a loop or loops being fixed in the pelvis. The bowel appeared thick and edematous, but in places it appeared gray-white and mottled, and the serosa was avascular with areas of telangiectasis. They described perforation, necrosis, localized and generalized peritonitis, and fistula formation as pathologic features of the illness.

Gardner and Anlyan[6] reported two cases of radiation injury of the small intestine in 1952. One of their patients suffered from massive hemorrhage from the bowel, and the other from perforation following therapy for carcinoma of the cervix. Their patient who suffered from massive hemorrhage had been subjected to radium and x-ray therapy 12½ years previously for carcinoma of the cervix. They resected the involved segment of bowel and reestablished continuity. The surgical specimen showed three ulcerating, stenosing lesions in the terminal part of the ileum.

Salvesen and Kobro,[7] reporting on symptomatic sprue in 1939, described a patient with the malabsorption syndrome secondary to actinic or factitial enteritis. Their patient had had large amounts of deep x-ray therapy in 1920 to induce amenorrhea. Years later, she presented a rather characteristic picture of sprue syndrome which failed to respond to supportive measures. At necropsy, they found two strictures about 10 cm. apart in the midportion of the small intestine. Microscopically, there were superficial ulcerations of the mucosa and fibrous, cicatricial tissue in the intestinal wall.

SYMPTOMS

Symptoms resulting from irradiation damage to the bowel may occur soon or many years after therapy. Early symptoms usually consist of diarrhea, bleeding, rectal pain, urgency and tenesmus. These are commonly due to factitial proctitis. The symptoms usually appear within a few months after treatment is instituted, but may be delayed for a year to a year and a half. Generally, they gradually subside and eventually disappear or become minimal.

Another type of reaction, which I have chosen to call an intermediate one, usually occurs within three or four years after treatment has been instituted, and generally consists of abscess formation within the pelvis. This may appear as pyometra or as an abscess due to perforation of an ulcer in the bowel wall. This type of reaction is not so common as is factitial proctitis.

The late lesions appear many years after treatment and usually consist of episodes of intermittent, incomplete obstruction of the small intestine. Occasionally, severe hemorrhage from the bowel occurs, and very rarely a malabsorption syndrome develops.

FEATURES OF THE PRESENT SERIES OF CASES

This paper concerns the late gastrointestinal complications of x-ray and radium therapy for

carcinoma of the female genitourinary tract in seven cases encountered in recent years. Five of the patients had episodes of intermittent, incomplete obstruction of the small intestine, one had severe hemorrhage from the gastrointestinal tract, and one had a severe malabsorption syndrome.

The five patients with obstructive symptoms gave histories of episodic, cramping abdominal pain, usually associated with nausea and vomiting, obstipation and some abdominal distention. Frequently, diarrhea appeared as the episode subsided. Between episodes, bowel habits were usually irregular. The duration of attacks ranged from a few hours to several days. Physical examination usually disclosed evidence of weight loss, borborygmi, and actinic changes on the abdominal skin. Occasionally, a mass and abdominal distention were present.

The patient with hemorrhage secondary to factitial enteritis and ulceration had one episode of massive bleeding that required surgical intervention. This was followed by chronic loss of blood over a period of 12 years after the first operation. The patient with malabsorption syndrome gave a classic history of steatorrhea.

The average age of the seven patients was 44.1 years when carcinoma of the cervix was diagnosed, and 55.8 years when factitial enteritis was diagnosed. Thus, the interval between treatment and diagnosis averaged 11.7 years, the shortest interval being seven years and the longest interval 18 years. Four of the seven patients had had previous abdominal operations. At the time of examination at the Mayo Clinic, the changes characteristic of previous irradiation therapy were evident on proctoscopic examination in four of the seven patients, the proctologist describing a pale mucosa with evidence of telangiectasis, usually on the anterior rectal wall. Five of the patients exhibited the changes characteristic of actinodermatitis on the skin of the lower part of the abdomen.

In three of the five patients with recurrent intestinal obstruction, the episodes were of such severity that surgical intervention was indicated. It was possible to resect the involved segment of ileum and reestablish intestinal continuity in all three, and this procedure eliminated the patients' symptoms. The pathologist observed dense stricture formation, fibrosis and hyalinization in the bowel wall, and changes characteristic of irradiation in the walls of the blood vessels in all three patients, and associated ulcers of the mucosa in two of the three. Two of the five patients with recurrent intestinal obstruction elected to defer operation because the episodes occurred infrequently.

The patient who had massive hemorrhage, as well as chronic loss of blood from the intestinal tract, had two operations. The first consisted of a sidetracking procedure, but eventually practically the entire ileum had to be removed. Pathologically, this specimen of bowel contained dense strictures and an ulcer 6 mm. in diameter. The patient had no further evidence of bleeding, but diarrhea continued to be a problem because of the extensive resection. A stricture at the rectosigmoid had to be removed eventually.

The patient exhibiting the malabsorption syndrome underwent abdominal exploration and biopsy of the jejunum, colon, pancreas and liver. The findings characteristic of factitial enteritis were present in the jejunum and the colon; there were no significant changes in the liver or pancreas. Supportive therapy partially relieved the patient's diarrhea, and she gained about six pounds.

Detailed reports of three of these cases follow.

REPORTS OF CASES

Case 1 (Episodes of Intermittent, Incomplete Obstruction of Small Intestine From Factitial Enteritis). A 16-year-old white girl appeared at the Mayo Clinic on November 6, 1923, for examination because she had been told she had fluid in her thorax. She gave a history of lower abdominal pain following an injury while playing basketball. The results of general physical examination, laboratory studies and x-ray examination of the thorax were negative. She was dismissed with a diagnosis of no pulmonary disease.

The patient returned on May 3, 1940, at the age of 32, with the complaint of vaginal bleeding. For three months prior to admission, she had had intermenstrual bleeding and a brown vaginal discharge. For two weeks prior to admission, she had had daily vaginal bleeding. The night before admission, she had had a severe, sudden gush of bright red blood from the vagina, and although she was expecting a menstrual period, the flow was so profuse that she immediately consulted a physician, who inserted a pack, told her that she had an ulcerating lesion of the cervix and referred her to the Mayo Clinic. Physical examination disclosed a bleeding, ulcerating lesion on the left anterior and posterior portions of the cervix, with some extension into the left fornix. Bimanual examination indicated some involvement of the left broad ligament. Biopsy showed the lesion to be a squamous cell epithelioma, grade 4. On advice of a gynecologic surgeon and a therapeutic radiologist, a course of radium and deep x-ray therapy was instituted. This treatment was completed by June 14, 1940. Then, she required hospitalization for three weeks to control abdominal cramping, diarrhea and leg pain that had developed. After dismissal from the hospital, she slowly improved, and she had gained 18 lbs. by the time she returned for reexamination in September, 1940.

During the ensuing months, the patient was reexamined at brief intervals, and by October, 1941, the process was thought to be stationary and she was advised to seek reexamination after six to nine months. She was not seen again at the Clinic

until September, 1947, when she said that ever since the first year following her irradiation therapy she had had episodes of intermittent cramping, lower abdominal pain. The pain was occasionally associated with nausea and vomiting. In April, 1947, she had undergone abdominal exploration elsewhere, and "a few adhesions were freed" but no other abnormalities were found. However, her attacks had recurred three weeks after that exploration. The surgeon who had performed the exploration stated that the entire small intestine and large intestine appeared normal except for an adhesion that partially kinked the ileum about 10 cm. from the cecum. This adhesion was removed, and the area of attachment on the ileum inverted with one or two interrupted silk sutures. He said that the stomach, gallbladder and kidneys appeared normal, that the pelvic organs were markedly atrophic, that there was no sign of malignant disease there or elsewhere, and that the liver and pancreas felt normal.

Physical examination in September, 1947, gave essentially negative results except for actinic changes of the skin over the lower part of the abdomen from previous x-ray therapy. There were no abdominal masses. The cervix had been destroyed and the vaginal vault narrowed. The broad ligaments were free. Extensive studies, including x-ray examination of the stomach, small intestine and colon, gave normal results. The value for hemoglobin, the leukocyte count, the differential count, the urinalysis and the values for fasting blood sugar, serum amylase and serum lipase were also normal. Porphyrins were not found in the urine. Consultants caring for the patient thought that many of the features of the illness suggested intestinal obstruction, but in view of the recent negative exploration, they were reluctant to advise a repetition of the procedure.

When the patient was next seen, in July, 1951, she was thought to be "cured" of the original carcinoma. She continued to have intermittent episodes of lower abdominal cramping pain, however, lasting from a few hours to a day or so, and she had occasional nausea with some vomiting, but never abdominal distention. Her bowels moved during the attacks. She was seen in consultation by a neuropsychiatrist, who felt that she had an anxiety tension state.

The patient was next seen in January, 1957. She then gave a history of episodes of lower abdominal pain associated with rhythmic, cramping lower abdominal discomfort and borborygmi. The episodes frequently lasted for just an hour or so, but if they persisted for six hours, nausea and vomiting developed. In the past, she had required intravenous administration of fluids to control the episodes. She had never been intubated with a Miller-Abbott tube during any of these attacks. Seventy-five per cent of the attacks occurred between 3 and 5 a.m., and awakened her from sleep. She never had an attack while under observation at the Clinic. The longest episode lasted five days. Between episodes, she was completely free of symptoms.

On physical examination, the patient weighed 110 lbs. The blood pressure, pulse and temperature were normal. There were two well-healed abdominal scars from previous appendectomy and from subsequent negative exploration. The lower abdominal skin showed typical postirradiation changes. The vagina was atrophic.

The laboratory findings were: erythrocyte count 4,060,000 and leukocyte count 5,900 per cubic millimeter of blood; hemoglobin 11.6 Gm./100 ml.; erythrocytic sedimentation rate 12 mm. in one hour (Westergren method); urinalysis negative; urinary porphyrins absent; and VDRL test for syphilis nonreactive.

X-ray examination of the thorax gave normal results. Proctoscopic examination for a distance of 13 cm. from the anal margin showed only normal mucosa. There was no evidence of factitial proctitis. X-ray examination of the colon and terminal part of the ileum and of the small bowel and stomach gave normal results.

The patient's problem was again reviewed. When the roentgenograms of the small intestine were reexamined, it was felt that there was some evidence of narrowing in the lower part of the ileum. A tentative diagnosis of factitial enteritis with incomplete obstruction was entertained. It did not seem possible to exclude solitary ulcer of the ileum, Meckel's diverticulum, adhesions and intussuscepting tumor, although these diagnoses seemed unlikely. After adequate preoperative preparation of the bowel, Dr. G. A. Hallenbeck performed an abdominal exploration on January 15, 1957. The operative report follows:

"The patient had had radium and x-ray therapy for carcinoma of the cervix approximately 17 years previously and had experienced episodes of lower abdominal cramping pain since. A primary right midrectus muscle-retracting incision was made. The liver, stomach, duodenum, pancreas, kidneys, spleen and diaphragmatic hiatus were normal, as were the colon and retroperitoneal region. The uterus was so small that it appeared almost infantile in type. It and the cervix were freely movable, and if I had not known about the previous cervical carcinoma, I would have had no way from this exploration to realize that it had ever occurred. The ovaries were atrophic, and the tubes looked normal. The jejunum appeared slightly thick-walled, but, on the whole, normal. In the upper part of the ileum were two strictures which narrowed the bowel greatly, and there appeared to be actinic ileitis. About three feet of ileum below this contained multiple areas of stricture in various degrees of formation. The terminal 12 inches of ileum presented no strictures, although there was a little more thickness of the wall than

normal. We resected a portion of ileum and passed a 24F. catheter down the distal portion to the ileocecal valve to be certain that no hidden strictures were present in the terminal ileum. An end-to-end ileoileostomy was done using an inner row of running chromic catgut and an outer row of interrupted silk sutures. The mesoileum was sutured together to close the opening beneath the anastomosis. The resulting anastomosis was larger than the caliber of the bowel since we made it obliquely. The abdomen was closed without drainage in layers with chromic catgut."

The pathologist reported that the surgical specimen, consisting of 55 cm. of small intestine, showed factitial enteritis with multiple (six) ulcers, three of which were annular and obstructing, the largest measuring 3 by 2 by 0.5 cm. and the smallest 2 by 0.5 by 0.5 cm. In addition, it showed three punctate ulcers 3 mm. in diameter.

The patient had an uneventful postoperative course except for a few loose stools daily. No further episodes of obstruction occurred. She subsequently gained weight and had no further abdominal symptoms. Her bowel habits became normal.

Case 2 (Malabsorption Syndrome Secondary to Factitial Enteritis).[8] A 61-year-old white housewife, admitted to the Mayo Clinic for the first time on October 21, 1958, had had diarrhea intermittently for 18 years, and more recently had had episodes of periodic chills and fever. In October and November, 1940, she had been exposed elsewhere to deep x-ray treatments for 30 days because of menometrorrhagia. She said that in January, 1941, she had received 72 hours of radium irradiation at another institution. After her initial treatment, she had had fairly severe diarrhea for about a year. It then gradually subsided, but since 1945 she had averaged 10 to 15 bowel movements daily, which were pale and foamy, and occasionally contained undigested food. She averaged three to four bowel movements at night, and about eight during the day. Her appetite was excellent. She had no obstructive symptoms, and did not complain of distention, nausea, vomiting, abdominal cramping or constipation. Ten years previously, borborygmus had been so severe as to prove embarrassing. She denied glossitis, paresthesias of the extremities or cramping in the hands, though she had noticed night cramps in the feet for years. Two years before admission, she had been told that her blood was "down," and she was given "liver capsules." For several months prior to admission, she had had irregular episodes of chills associated with generalized shaking and elevation of temperature to 102°F. Chills usually lasted 15 to 20 minutes, and fever incapacitated her for 24 hours. She denied urinary symptoms. In 1945, she had weighed about 100 lbs., but for the last several years she had averaged 86 lbs.

Physical examination showed a height of 64½ in., and a weight of 80 lbs. The blood pressure, pulse and temperature were normal. She was cheerful, though emaciated and appearing chronically ill. The skin was somewhat dry and thickened. There were changes of actinodermatitis of the skin over the lower part of the abdomen, especially in the right lower quadrant.

The laboratory findings on admission were: erythrocytes 3,930,000; leukocytes 6,700; hemoglobin 9.7 Gm.; differential count normal; findings on blood smear, mild hypochromasia and polychromasia with toxic-appearing polymorphonuclear cells and an occasional myelocyte; blood agglutination tests for Brucella organisms negative; several blood and urine cultures negative; urinalysis negative; stool examinations for ova and parasites negative; findings on stool culture, only the usual flora—no enteric pathogens; serum bilirubin normal; sulfobromophthalein excretion test, no retention of dye at the end of one hour; prothrombin time 20 sec.; serum carotene 12 I.U./100 ml.; total serum proteins 5.8 Gm. (albumin 3.9 Gm. and globulin 1.9 Gm.) per 100 ml.; serum calcium 9.2 mg./100 ml.; serum potassium and serum sodium normal; fasting blood sugar normal; and glucose-tolerance curve flat, giving a level of 95 mg./100 ml. after fasting, 100 mg. at the end of one hour, 78 mg. at the end of two hours, and 86 mg. at the end of three hours. A 24-hour stool collection on an unmeasured diet contained 41.6 Gm. of fat (49.5 per cent), 3.2 Gm. of nitrogen, and 84.1 Gm. of total solids.

X-ray examination showed the residue of an old inactive tuberculous process at the apices of the lungs, a normally functioning gallbladder, a normal esophagus, stomach and duodenum, and a normal colon and terminal part of the ileum. X-ray examination of the small intestine initially was thought to show a normal condition. Reexamination, however, disclosed a mild deficiency pattern in the lower part of the jejunum and the ileum, and irregular dilatation in the distal part of the ileum, accompanied by some narrowing. A proctoscopic examination disclosed no significant findings for a distance of 25 cm. Excretory urograms did not disclose any abnormality. Mild ptosis of the right kidney was noted. A tentative diagnosis of actinic enteritis with the malabsorption syndrome was made, and the patient was admitted to the hospital on November 10, 1958, for further study and attempted therapy.

With the patient on a fat intake of 100 Gm., a 72-hour stool specimen contained 179 Gm. of fat, 20.2 Gm. of nitrogen, and 344 Gm. of total solids. This amounted to a daily excretion of 59.6 Gm. of fat and 6.7 Gm. of nitrogen. An absorption test with cobalt^{60}-labeled vitamin B_{12} showed that seven per cent of the dose was excreted in the urine before administration of supplementary intrinsic factor, and six per cent after administration (normal, more than eight per cent). After a

course of tetracycline (Achromycin) therapy, 500 mg. every six hours, 70 Gm. of fat and 8.8 Gm. of nitrogen per day were excreted in the feces, and five per cent of the dose of cobalt^{60}-labeled vitamin B_{12} administered was excreted in the urine. Diarrhea became considerably more severe during antibiotic therapy. A measured amount of oleic acid labeled with I^{131} was given, and the stools were collected until the radioactivity reached an insignificant amount; 69.5 per cent of the ingested amount was recovered from the feces (normal, less than five per cent), which is evidence of a severe defect in absorption. Then, a gluten-free diet was administered for a week. It had no effect on the number of stools in a 24-hour period, nor was the excretion of fat diminished.

It was thought that possibly a short segment of the distal part of the ileum might be involved which would lend itself to resection, with improvement in the clinical condition of the patient. Consequently, Dr. J. M. Waugh saw the patient and, after adequate preoperative preparation, explored the abdomen on December 8, 1958. The surgical report follows:

"A primary lower midline incision was used. The structures in the abdominal wall appeared normal except for the skin. The uterus, tubes and ovaries were atrophic. There was a small amount of chyle-colored ascitic fluid, and a specimen for culture was taken. The gallbladder was normal. The pancreas, both kidneys, spleen, stomach, duodenum and upper six inches of jejunum were normal. Starting, however, at this level and continuing down the small intestine and throughout the entire colon was a mild inflammatory process which probably was a late result of the deep x-ray therapy. Practically no lymph nodes were visible in the mesentery, so that I feel sure that this was not a primary inflammatory disorder, and it did not resemble either regional enteritis or ulcerative colitis. One of the small nodes was removed from the mesentery of the terminal part of the ileum for microscopic examination. Tissue removed from the left lobe of the liver and the inferior edge of the body of the pancreas was essentially normal. A biopsy specimen was then taken from the lower part of the jejunum and also from the mid-transverse colon. There was nothing to suggest Whipple's disease or retroperitoneal tumor. I feel that this process is secondary to x-ray therapy, as noted above. Closure was with chromic catgut in the peritoneum, wire in the anterior fascia and silk in the skin. During the course of the operation, 500 ml. of blood was administered."

The pathologist reported marked thickening of the blood vessels in the submucosa of the small bowel with partial fibrous replacement of the circular layer of smooth muscle and very little atrophy of the mucosa, moderate thickening of the blood vessels in the submucosa of the transverse colon, and an essentially normal condition of the liver and pancreas. An inflammatory lymph node was seen in the transverse mesocolon. The changes in the small bowel and colon were considered consistent with postirradiation changes.

Convalescence was uneventful, and the patient was dismissed from the hospital on December 23, 1958. Prior to dismissal, she was started on a modified sprue diet. She received vitamin B complex parenterally, including vitamin B_{12} and folic acid. Postoperative blood transfusions had brought her hemoglobin level to 11.8 Gm./100 ml., and prior to dismissal the level was 11.6 Gm. She was advised to follow her dietary program, to receive periodic injections of the B complex of vitamins and to have her hemoglobin determined at frequent intervals. It was suggested that blood transfusion or parenteral administration of iron might be indicated.

Case 3 (Blood Loss Secondary to Factitial Enteritis). A 44-year-old woman, admitted to the Mayo Clinic in 1938, said that she had had a watery vaginal discharge for three months, a bloody discharge for two months and dull suprapubic pain for two weeks. Physical examination disclosed carcinoma of the cervix with involvement of the vaginal vault and infiltration of the left broad ligament (stage 3). The biopsy diagnosis was squamous cell epithelioma, grade 2. She was treated with radium and x-rays. In 1939, she had mild rectal bleeding and diarrhea, with proctoscopic evidence of factitial proctitis. From 1939 to 1944, she had frequent examinations. During this time, bleeding had stopped, but mild, periodic diarrhea and low abdominal cramps, nausea and vomiting were present intermittently. The patient returned for examination in 1945 with the history that for one week previously she had passed large, black and dark-red bloody stools. She was very weak, and fainted on the morning of the examination. She was quite pale. Her blood pressure was 98 mm. Hg. systolic and 50 mm. Hg. diastolic. The pulse rate was 100/min. The hemoglobin measured 4.5 Gm., and the erythrocyte count was 1,666,000. The patient underwent several blood transfusions. After preoperative preparation, surgical exploration of the abdomen disclosed two sites of narrowing and stippling in the jejunum. The distal part of the ileum and the cecum were narrow, with many areas of stippling. The ileum was transected 3½ feet from the ileocecal valve, and ileotransverse colostomy was performed. The pelvic colon was seen to be narrowed at the rectosigmoid just at the pelvic peritoneal fold.

The patient was examined annually from 1945 to 1950, during which time she had four to seven loose movements per 24 hours. Her hemoglobin remained at normal values. In 1951, her physician at home found the value for hemoglobin and the erythrocyte count low. He treated her with iron and gave vitamin B_{12} parenterally. Reexamination at the Clinic showed a stricture at the rectosigmoid on proctoscopic examination. From 1951 to

1957, she complained of chronic fatigue. She continued to be mildly to moderately anemic. She had periodic low abdominal cramping with nausea and vomiting, but without distention. It was felt that she had obstruction in the sidetracked ileum, as well as a bleeding lesion.

Physical examination in December, 1957, showed mild pallor, and indefinite fullness in the right and left lower parts of the abdomen. The hemoglobin measured 9.2 Gm., and the erythrocytes numbered 3,490,000. A 24-hour stool specimen collected while the patient was receiving an unmeasured diet contained 32.4 per cent fat. The excretion of cobalt^{60}-labeled vitamin B_{12} was two per cent before administration of additional intrinsic factor, and four per cent after administration. The serum iron measured 19 micrograms per 100 ml. Proctoscopic examination disclosed, at 12 cm. from the anal margin, a stricture that would not allow passage of the proctoscope. There were telangiectases in this area, and the mucosa bled easily. Iron given intramuscularly increased the hemoglobin, but the loss of blood continued. Resection of the sidetracked ileal segment was advised. Consequently, in December, 1957, Dr. J. M. Waugh performed an abdominal exploration after adequate preoperative preparation. The operative report follows:

"The entire jejunum was normal. Two areas in the upper part of the ileum above the previously made side-to-side ileocolonic stoma showed inflammatory change which could have represented either an actinic or an old ulcerative process such as regional enteritis. The bypassed ileum was thickened and contracted. There were several areas within it that could have been responsible for the bleeding. In the terminal part of the ileum and in the ascending colon, there were small hemangiomas that also may have been the telangiectatic effect of x-rays or a congenital abnormality. There was rather marked stricturing of the rectosigmoid; if this should cause any bleeding or obstruction, it could be resected. The entire ileum was removed, leaving five feet of normal small intestine distal to the ligament of Treitz. The ascending colon also was removed. The ileocolonic stoma was disconnected, and an end-to-end jejunocolostomy was performed between the lower part of the jejunum and hepatic flexure of the colon."

The pathologist reported that the specimen consisted of 100 cm. of ileum and 12 cm. of right colon, and included the cecum and both uterine tubes and ovaries. Postirradiation ileitis and cecitis with two zones of irradiation scarring were situated 40 and 10 cm., respectively, from the proximal end of the small bowel. The most distal area of scarring was associated with a postirradiation ulcer measuring 6 mm. in diameter. Multiple areas of telangiectasis were seen on the serosal surface of the large and small intestines. The ovaries contained serous cystadenomas 2.5 cm. in diameter. The uterine tubes showed evidence of chronic salpingitis.

Postoperatively, the patient continued to have persistent diarrhea, but her anemia was corrected. Because of symptoms resulting from the residual factitial rectal stricture, the rectum was resected in April, 1958, by Dr. Waugh. The pathologist reported that the specimen consisted of 10 cm. of rectum, rectosigmoid and sigmoid, which presented evidence of factitial proctosigmoiditis with multiple chronic inflammatory ulcers varying from 1.5 to 0.3 cm. in diameter. Some of the vessels showed marked intimal fibrosis, whereas others were telangiectatic. Postoperative healing was slow. The patient's general condition was satisfactory, but she continued to have some diarrhea.

SUMMARY

Factitial enteritis is an unusual lesion. It results from irradiation of malignant tumors of the female genitourinary tract, and it may appear many years after irradiation. It is important to recognize this entity, for it is a benign process. Symptoms of intermittent, incomplete intestinal obstruction, hemorrhage from the gastrointestinal tract, or the malabsorption syndrome occurring in a woman previously treated for malignant disease of the genitourinary tract by irradiation should not be attributed to extension or metastasis from the original disease until concrete proof of metastasis has been obtained. Otherwise, the patient may be denied specific curative therapy for a benign lesion, or she may be given additional irradiation which will intensify the pathologic process. Failure to recognize recurrent bouts of intestinal obstruction or hemorrhage as a complication of irradiation, rather than as a complication of the disease may result in needless loss of life. Surgical resection of the involved segment provides a cure for these symptoms. With respect to the rare situation of the malabsorption syndrome, the diagnosis can be confirmed surgically, and an appropriate medical regimen can be instituted.

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Cell Damage, Enzymes and Clinical Acumen

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IN THE PAST few years numerous papers have been written on the uses of serum glutamic oxaloacetic transaminase (SGOT) in clinical medicine. A few excellent reviews have summarized these uses.[1-4]

The following is a report of the authors' initial clinical experience with this test at the State University of Iowa, an experience that began in July, 1956, and a few of their related experimental observations.

There are few physicians in general or specialty practice who could not gain valuable information from appropriate application of this test. It is not a liver-function test, nor is it solely a test for myocardial infarction. It does not replace the white-blood-cell count or the determination of the erythrocyte sedimentation rate, but supplements those tests, and like them it applies to many clinical problems.

SGOT is one of the many intracellular enzymes that function in normal cellular metabolism. It performs no known function in blood plasma, and its presence there is merely indicative of the concurrent rate of cellular breakdown. A serum level of over 40 units means there has been an unusually large cell breakdown. The analysis of SGOT has an advantage over other laboratory tests in that it is a direct measurement of acute cell disruption. It is released into the blood stream relatively soon after a cell is damaged, making possible an early estimate of the amount of damage.

We have made an extensive review of the pertinent literature in connection with our study of the clinical and experimental uses of this enzyme.[5] In a period of four years, the current lists of medical literature show, there have been as many as 243 publications on GOT alone.

In addition, we have examined over 800 clinical blood samples in our experimental laboratory, using a Beckman spectrophotometer and the original Karmen method.[6] The test is now being run in our laboratory and in the S.U.I. Hospitals Clinical Biochemistry Laboratory by means of a simpler colorimetric analysis which is cheap, easy and accurate, and therefore more satisfactory.[7, 8] The S.U.I. Hospitals Clinical Biochemistry Laboratory received 400 blood samples in the past year to be analyzed for GOT. Out of them, 42 per cent showed values greater than 40 units per milliliter, and 21 per cent showed values greater than 100 units per milliliter. Other enzymes have been used,[9-12] and we have tried a number of them, but we believe that GOT, so far, is the easiest and most reliable for routine use.

The authors are members of the staff of the Surgery Research Laboratories at S.U.I.

THE TEST IS NONSPECIFIC FOR ORGANS AND DISEASES

The ratio of GOT (glutamic oxaloacetic transaminase) to GPT (glutamic pyruvic transaminase) is lower in viral heptitis than in other diseases causing liver damage.[13] GOT alone is nonspecific for disease entities, but specific for cell breakdown, and an elevated enzyme level in itself does not make a diagnosis. Like the white-blood-cell count and the erythrocyte sedimentation rate, SGOT may become disease- or organ-specific when combined with the clinical signs and symptoms that point to a particular condition. SGOT may then be useful in confirming or disproving a suspected clinical diagnosis such as, for example, myocardial infarction. In a few instances this may be the only laboratory test capable of distinguishing between two clinically similar illnesses such as obstructive and cytotoxic liver disease. Obstructive jaundice may be associated with levels up to 300 units. In hepatitis the SGOT may rise to levels up to 10 times as high.

In selected instances, the test may be a valuable index to prognosis. In the seriously ill patient with failing circulation, or after an episode of shock, a high SGOT level may be of serious import, for it generally means widespread tissue damage. SGOT levels after myocardial infarction correlate with the amount of muscle-cell loss, and persistent or recurrent elevation indicates extension of the disease and a poor prognosis. In other patients, mild elevation of SGOT in appropriate time relationship to typical mild symptoms may be of more value than the EKG. In viral hepatitis, high levels indicate more damage and a more seriously ill patient than do low levels. Persistent elevation for months or years indicates progressive disease.

THE TIME OF SAMPLING IS IMPORTANT

For maximum diagnostic benefit, serial determinations and judgment in the timing cannot be overemphasized. The level of the circulating enzyme from destroyed cells is counterbalanced by a constant rate of removal of enzyme through as yet unknown processes. The result of a single episode of cell damage is a rise and then a fall in serum enzyme levels. Injudicious or single sampling may lead to erroneous conclusions, since the sample may be taken before the enzyme is released or when the enzyme concentration is rising or falling.

An ideal sampling is one which includes a base level (which may occasionally be obtained even after the injury but before the enzyme rise begins), a level at the peak of the curve, and a sample at a time when the enzyme again approaches the base level. This ideal sampling may be difficult to achieve, but it is helpful to keep in mind the expected sequence of cell damage in the disease process under study. There is usually a relatively transient rise following myocardial infarction. In hepatitis, the damage is prolonged for several weeks or longer. In myocardial infarction, the enzyme level usually begins to rise about six to eight hours after the infarct, and peaks at 36-48 hours. In liver disease, the maximum levels may not appear for some days or weeks after the SGOT becomes elevated. In the presence of liver metastases, SGOT may vary from week to week, and is often mildly elevated. The astute clinician who suspects hepatitis before the appearance of jaundice may be able to either confirm or decrease his suspicion on the basis of the SGOT.[14, 15] The chronic alcoholic whose GOT rises after each drinking bout is probably on the way to cirrhosis if the drinking is not terminated.[16]

Cell damage in any tissue may result in enzyme release, but the release is detectable only if the injured tissue is perfused with blood. We have seen cases of arterial embolism and thrombosis to the extremities with massive tissue death but with only mild and transient elevation of enzyme levels. The same may occur after bowel infarction or strangulation. In these cases, the enzyme simply does not reach the systemic circulation. In contrast, patients with frozen extremities show marked elevation of SGOT immediately after the tissue thaws and circulation is reestablished. Extensive tissue damage may cause no enzyme elevation in the presence of good blood flow if the enzyme protein is denatured by the injurious agent. The determination of enzyme levels depends on the action of the undamaged enzyme *in vitro*, and denatured enzyme cannot function. As an example of this, it can be mentioned that patients with extensive burns usually have very little elevation of SGOT.

Contrary to our early expectations, this enzyme test is of very little benefit in the diagnosis of the acute abdomen. We have studied patients with ruptured spleen, sigmoid volvulus, closed-loop obstruction, incarcerated hernia, acute cholecystitis, etc., with no consistent elevation in SGOT. The reasons for the lack of elevation of SGOT may vary somewhat with the disease, but probably it can be attributed to a lack of blood flow through the damaged organs, to the absence of rapid cell death or because of a denaturation of protein at the damage site by phagocytosis in association with a local inflammatory reaction. Sudden breakdown of cells leads to release of active enzyme, whereas infection leads to local debridement and walling-off. In the latter case, the systemic reaction to tissue damage may be manifested only by the classical systemic signs of inflammation such as fever, elevated white blood count and elevated sedimentation rate, with no GOT elevation. Interpretation of the SGOT test has certain similarities to the common-sense type of reasoning so familiar to physicians in connection with a white-blood-cell count.

A SERIES OF TESTS IS FREQUENTLY USEFUL

The negative reaction expressed by a few physicians either after personal experience with SGOT or after reading some of the voluminous literature about it probably stems from their desire for disease-specific tests. The specificity here is only for acute cell breakdown. An example of the supposed failure of the test is the jaundiced patient with an atypical history that does not quite fit common-duct stone, neoplasm or hepatocellular disease, and whose SGOT is between 50 and 200 units. Such a value would be consistent with any of the diseases in the differential diagnosis. The natural reaction of the patient's physician is that the test is not helpful.

Perhaps such a reaction stems from a failure to realize that even the one determination has given valuable information about the current rate of cell breakdown, and that repeat tests may still be an excellent means of following the course of the disease and grading the extent of liver-cell necrosis that is going on at each time of sampling. Finally, whether the patient is treated by common-duct exploration or by medical management, serial SGOT analyses may be an excellent means of determining the effectiveness of the treatment in ameliorating the accelerated cellular necrosis.

It occasionally surprises a physician to have a patient die of advanced cirrhosis or extensive liver necrosis despite the fact that his SGOT, obtained shortly before his death, was only slightly elevated. Active cell breakdown, in such instances, had occurred long enough before so that the circulating GOT had been disposed of. Had analyses been made during the early period of active cell destruction, the levels would have been high. Obviously, a falling SGOT level in a patient who is dying of liver disease is not to be interpreted out of context. A similarly falling level could be found in a patient with a gangrenous leg. The active damage is over, but the patient still has the residuum.

TESTS MAY HELP DETERMINE PROGNOSIS

A rising level of SGOT immediately following embolectomy may have both good and bad meanings. The rise of SGOT indicates that once-occluded channels are now receiving blood, and thus some increase in SGOT indicates success in opening up the circulation. The higher the level, however, the more the damage and the greater the

likelihood of incomplete recovery. It might also be supposed that the higher the level of SGOT after embolectomy or crushing injury, the more likely are secondary shock and damage to other organs, especially the kidney. Evaluation of this hypothesis is under way in our laboratory at the present time. Study of urinary enzymes has received inadequate attention in the study of acute renal damage. We have recently completed a study of 35 experiments on isolated perfused kidneys at varying pH levels, and have found that a pH of 7.8 is extremely damaging to the kidney, whereas decreasing the pH to as low as 6.9 is accompanied by minimal kidney enzyme loss. Further studies are under way with the intact dog and with urines collected from patients with hypochloremic alkalosis from vomiting. We have observed elevated urinary enzyme levels when the serum GOT was normal. Normal urine contains practically no GOT.

The failure of SGOT to rise after the use of the pump oxygenator or hypothermia, or after an unexpected but successfully treated cardiac arrest, could also be looked upon as a failure of the test to supply any information, but actually these are valuable negative results. The failure of SGOT to rise in a patient with chest and arm pain can be of help in the same way that a normal white count helps in the diagnosis of a patient with suspected rupture of the spleen or subphrenic abscess.

The average physician will probably do well to use the one enzyme GOT to diagnose and follow cell damage. There are refinements which allow greater organ specificity through the simultaneous measurement of several different enzymes. In most instances this added information is unnecessary. The physician who becomes familiar with the GOT test will find many uses for it, but will not be used by it. Like other laboratory tests, it does not take the place of good clinical judgment.

SUMMARY

The analysis of SGOT (serum glutamic oxaloacetic transaminase) is an established, simple, reliable and inexpensive laboratory test that is specific for acute cell breakdown. It is nonspecific for organs and diseases. The level is dependent upon the state of affairs at the time of sampling —i.e., extent of cell breakdown, adequacy of circulation in the damaged tissues and rate of removal of enzyme from the blood. Maximum usefulness of the test depends upon a careful selection of patients and of times for sampling blood. The test is of great value in following the course and determining the prognosis in conditions associated with acute or continued active cellular destruction.

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QUICK DETECTION OF PHENYLKETONURIA

A simple dip-and-read strip test for the detection of phenylketonuria (Phenistix®, Ames) is said to offer a greater degree of accuracy than the conventional liquid ferric chloride test. Usually conducted on the urine of babies, these vital tests can signal the need for corrective therapy to prevent mental retardation.

Establishing the importance of the improved and simplified testing, the Ames Company points out that in phenylketonuria, a block in the utilization of phenylalanine causes it to accumulate in the blood, and that accumulation is accompanied by irreversible injury to the brain. Recent innovations in diet therapy indicate successful treatment of the disorder.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines

The Tuberculin Test—The Master Key

J. ARTHUR MYERS, M.D.

MINNEAPOLIS, MINNESOTA

Perhaps as many as one in every five adult Iowans, Dr. Myers warns, may react to tuberculin—i.e., may have primary tuberculous lesions—and thus the state needs a continuing program of periodic tuberculin testing for its entire population. Such a project, he says, will cost many times the amount that Christmas Seal sales have been raising.

THERE SEEMS little doubt that the early work by Dr. Walter L. Bierring and his colleagues in combatting tuberculosis was largely responsible for Iowa's reporting the lowest mortality rates in the nation for many years. The procedures in those days consisted of preventing the spread of the tubercle bacilli of both the bovine and the human types by breaking or preventing contact between uninfected persons and contagious cases. Your state sanatorium opened as early as 1908, and other sanatoria were provided in subsequent years.

In the early years of the campaign against tuberculosis, most time, effort and expenditures were of necessity directed toward combatting the clinical and contagious forms of the disease. It was that work which brought tuberculosis to its knees and enabled present-day workers to attack the tubercle bacillus, rather than just to attempt repairing the damage it had caused. The Iowa Tuberculosis and Health Association, in close cooperation with the Iowa Trudeau Society, was among the first groups to undertake a program of the latter sort—one designed to eradicate pathogenic forms of tubercle bacilli by finding the citizens and animals throughout the state in whom those organisms have taken refuge.

DETECTING OF PRIMARY TUBERCULOSIS CAN BE 100 PER CENT EFFICIENT

The chief lament of those who are striving to control cancer is that no test is available which will detect its presence soon after it begins to form and when its lesions are microscopic. It is believed that if such a test were available, all reactors could be promptly examined, and those in whom lesions had not already attained macroscopic size could undergo frequent examinations of those parts of the body which cancer frequents, such as the lungs and stomach. If this were done, many primary lesions might be found as soon as they were large enough, had adequate consistency and were so located as to cast shadows visible on x-ray film or to be detected by such procedures as gastroscopy and bronchoscopy. If found then, such primary lesions could probably be extirpated before metastasis occurred, with resultant cure in the strict sense of the word.

In tuberculosis, we are fortunate in having just such a test, one that detects the presence of tubercle bacilli within three to seven weeks after their invasion and when the lesions, for the most part, are still microscopic. Despite the fact that tuberculosis differs from cancer in that the initial lesions are nearly always multiple and may be located in various parts of the body, nearly all cases found as soon as possible after the invasion of tubercle bacilli has occurred can be managed so that serious contagious illness does not result.

If this is to be accomplished, it is exceedingly important that every physician become familiar with the early pathogenesis of tuberculosis.

Congenital tuberculosis does occur, but it is a rarity. Invasions by tubercle bacilli nearly always take place after birth. This fact facilitates our work, insofar as infants are concerned, by requiring only that we create a tubercle-free environment for the newborn by making sure that the mother, the other relatives, the hospital personnel, the visitors, etc. are not emanating tubercle bacilli. Such an environment must be maintained for the child through his pre-school years, while he is in school and after his formal education has been concluded. The work of your predecessors and the work that you, yourselves, are doing has gone a long way toward achieving that objective.

ONE ADULT IOWAN IN FIVE MAY HAVE PRIMARY TUBERCULOSIS

In your certification of schools program, which began in 1955, you had administered the tuberculin test to 127,544 children as of August 31, 1958, and only 3 per cent of those youngsters, from kindergarten through high school, had reacted. Although that accomplishment is phenomenal, there is still a serious problem in Iowa that will continue as long as *any* child reacts to the tuberculin test.

Dr. Myers, a professor of internal medicine and of preventive medicine and public health at the University of Minnesota, made this presentation at the Annual Meeting of the Iowa Trudeau Society, in Des Moines, on April 8, 1959.

In that same program, you have administered the tuberculin test to 8,269 school employees, of whom 18.5 per cent have reacted. A considerable number of your teachers, school custodians, etc. were born before some of your present tuberculosis control measures were in operation. Therefore, many more infections occurred among them than occur among your present generations of children.

From this finding among the school personnel, it would seem reasonable to estimate that in the neighborhood of 18 to 20 per cent of adult Iowans are harboring tubercle bacilli. Thus, the magnitude of the present tuberculosis problem in this state still looms high. It is among the present tuberculin reactors and those whom they may infect that future cases of clinical tuberculosis will develop. Therefore, if the infected persons are not found and placed under adequate observation, there will be an annual crop of clinical tuberculosis that must be harvested. A large part of this crop will be overripe before harvest, and the bacilli will have been disseminated to others. Thus, this germ will perpetuate itself so that there can be no hope of your ever attaining the eradication goal.

However, with present knowledge of pathogenesis and by intensifying and extending the program you have already adopted, you can eradicate the tubercle bacillus. This is a distant goal, and thus all tuberculosis workers must prepare for a long and costly journey.

When tubercle bacilli pass a portal of entry, whether it be the digestive or the respiratory tract, the conjunctiva or an abrasion of the skin, they are promptly ingested by neutrophils, which then enter the lymph or blood stream and are deposited in various parts of the body—the kidneys, spleen, lungs, bones, joints, brain, etc. More are deposited in the lungs than in any other single organ, but those that are deposited extrathoracically cannot be ignored, for the foci of bacilli so established may later produce bone, joint, renal disease, meningitis, etc., etc., and indeed such lesions amount to 10 to 15 per cent of the total.

Within an hour after the invasion at these various points of focalization, lesions start to develop.[1] Usually the tubercle bacilli in these lesions are dealt with by the defense mechanisms of the body in the same manner that other foreign materials of the particulate type such as silicon dioxide are combatted.[2] The reactions in the involved areas, therefore, are non-specific. Encasements of fibrous tissue develop around the bacilli, with later deposition of calcium and true bone in many cases.

Promptly after bacilli are initially focalized, some are carried to the regional lymph nodes, where they are entrapped and encapsulated just as in the primary points of focalization. In combination, these early lesions constitute a primary tuberculosis complex. Such complexes may be located in various places wherever initial focalization occurs.

These early steps in the pathogenesis of tuberculosis usually result in no symptom or abormal physical finding—hence the large number of persons who react to tuberculin with no knowledge of when the invasion occurred, and in many of whom the physician can find no evidence other than the tuberculin reaction.

X-RAY DOES NOT FACILITATE DIFFERENTIAL DIAGNOSIS

In the neighborhood of 5 per cent of persons who are invaded by tubercle bacilli, regardless of the age at which the invasion has occurred, focalization in the lungs takes place and attains such size and consistency as to cast visible shadows on x-ray film. These individuals—as well as the 95 per cent whose focalizations do not cast visible shadows—have component lesions in the tracheobronchial lymph nodes. To be detected as shadows on x-ray film, lymph nodes harboring these lesions must become large enough to encroach definitely upon lung parenchyma.[3]

The demonstrable primary pulmonary infiltrates and their component hilum lymph node lesions nearly always subside without producing clinical manifestations. They gradually become imperceptible on x-ray, but deposits of calcium large enough to cast shadows may appear, then or later, at the site of the initial focalization and/or in the regional lymph nodes. This may also occur in pulmonary and lymph-node lesions that originally lacked the qualities necessary for the casting of x-ray shadows. Thus, within a year or more after invasion, these calcific deposits in some instances constitute the only evidence of the location of the lesions.

The primary tuberculosis complexes do not produce distinctive shadows, in either their early or their later stages, by means of which they might be distinguished from conditions such as histoplasmosis and coccidioidomycosis. Thus, inasmuch as shadows seen on x-ray films are never pathognomonic, differential diagnosis is impossible unless, in addition to the shadows, one is able to obtain specific information. The lesions of primary tuberculosis complexes are undetectable until approximately three to seven weeks after the invasion by tubercle bacilli.[4] At that time, the sensitivity to tuberculoprotein possessed by tissues, including the skin, has attained such a degree that it can be detected by the tuberculin test. As early as 1912, Ghon found tuberculous lesions in more than 99 per cent of bodies of persons who before death had had no evidence of tuberculosis other than the tuberculin reaction produced by the scratch test.[5]

Apparently, tuberculosis among cattle has been observed more extensively than has any other disease in animals.[6, 7] Tuberculin tests totaling 400,000,000 have been administered to cattle in this country since 1917, and more than 4,000,000 reactors have been slaughtered and examined. Indeed,

search for lesions in these carcasses has been productive enough to justify the confidence in the tuberculin test that veterinarians have exhibited by testing the cattle of this country periodically even though only 0.17 per cent react.

Unless more practical information becomes available concerning atypical acid-fast bacilli, nonspecific reactions and the like, one is justified in clinging to the teachings of Ghon, the findings of the veterinary profession and the experience of a large number of workers in human tuberculosis in stating that every person who reacts characteristically to tuberculin is harboring tubercle bacilli.

TUBERCULIN REACTORS ARE IN CONSTANT DANGER

There is reason for believing that in some persons all of the tubercle bacilli in the various areas of focalization may die after months or years.[8] In any event, in some persons whom the tuberculin reaction has demonstrated to have an unquestionable allergy to tuberculoprotein, the sensitivity later disappears or reaches such a low level that usual doses of tuberculin cannot elicit it. The number in whom this occurs may be larger than was formerly believed.

In others—probably the majority—tubercle bacilli remain alive over long periods of time, even for the lifetime of the individual, and the tissues continue to manifest sensitivity to tuberculoprotein. However, since sensitivity may wane if no reinfection occurs, larger doses of tuberculin are necessary to elicit it. This phenomenon may be observed in some persons in the upper age brackets, as has been demonstrated by Stewart and Dyson.[9]

Once the body has been invaded by tubercle bacilli and they have been encapsulated in primary complexes, there may be no further evidence of the disease throughout the individual's lifetime, even though it may be a long one. On the other hand, at any time after focalization has occurred and the tissues have become sensitized to tuberculoprotein, one or more of the capsules may be resorbed,[10] and the tubercle bacilli it has previously imprisoned are liberated on allergic tissue. Such endogenous reinfections result in specific reactions on the part of the tissues involved in the new invasion. Tuberculoprotein is a violent poison to tissues that have been sensitized to it.[11] This response is in sharp contrast with the non-specific reaction of tissues to tubercle bacilli during the initial invasion. Thus, the lesions produced by the first infection (primary tuberculosis complexes) are exceedingly benign, but lesions produced in allergic tissue by endogenous reinfections are likely to be progressive, either continuously or intermittently. In short, the human body does not tolerate and control lesions of the reinfection type as successfully as those resulting from a first invasion. Although many lesions, even of the reinfection type, are brought under at least temporary control by the natural defense mechanism, enough of them are not so well controlled and clinical disease develops. And it is to be remembered that tuberculosis, of all the communicable diseases, remains the No. 1 killer throughout the world! Obviously, therefore, lesions resulting from initial invasions by tubercle bacilli are important in that they produce tissue sensitivity and in that they provide bacilli, the prerequisites for all of the clinical forms of tuberculosis.

Theorists formerly contended that persons whose tissues react to tuberculin but who are apparently in good health and who have clear chests on x-ray must have been immunized against the clinical and destructive forms of the disease. Therefore, it was supposed that all such persons walked within a charmed circle of freedom from illness or death as a result of tuberculosis. The erroneousness of that theory was not recognized until large numbers of persons who had reacted to tuberculin while being, at the moment, apparently well had been observed over relatively long periods of time. Those observations proved incontrovertably that clinical tuberculosis evolves only in the bodies of persons who have previously developed primary complexes and whose tisses have thus been sensitized to tuberculoprotein.[12] The new dictum—one which contrasts markedly with the old one—is that *persons who react characteristically to the tuberculin test walk within the circle where all illnesses and deaths from tuberculosis* occur!

ACUTE REINFECTION FORMS OF TUBERCULOSIS ARE VARIED

For many years, the acute reinfection forms of tuberculosis, including pleurisy with effusion, pericarditis, meningitis and miliary disease, were regarded as primary forms of tuberculosis. Longitudinal observations and postmortem studies showed conclusively, however, that each of these conditions occurs in persons who have previously developed primary tuberculosis complexes, and the bacilli which cause the acute clinical diseases are derived from the lesions of these complexes. Pleurisy with effusion is usually caused by tubercle bacilli which find their way from a subpleural lesion to the pleural space and set up an acute reinfection type of disease. Pericarditis has the same pathogenesis. Meningitis is produced by bacilli which have found their way from lesions in or adjacent to the central nervous system into ventricles of the brain, and then through the foramen Magendie into the subarachnoid space.[13] Generalized miliary tuberculosis results when bacilli that have been discharged from a previously existing lesion, often a primary one, directly into lymphatic or blood vessels are widely disseminated throughout the body by the blood stream. In each of these situations, the intense inflammatory reaction is made possible by the allergic state of the tissues, and hence the reaction is specific, and

each lesion so produced is of the reinfection type. Therefore, the primary disease is responsible for the sensitivity and provides tubercle bacilli for reinfection.

Likewise, chronic reinfection forms of tuberculosis, such as those involving the lungs, kidneys, bones and joints, result from the liberation of previously encapsulated bacilli upon allergic tissue. For example, an area of disease in a kidney resulting from focalization of tubercle bacilli during the initial invasion may, if the capsule is resorbed, result in clinical renal tuberculosis at any subsequent time. This may be the only clinical lesion that such an individual develops throughout a long lifetime, all other bacilli remaining well encapsulated. A similar situation may occur in any part that is harboring walled-off tubercle bacilli. Such lesions develop far more frequently in the lungs than elsewhere, for many more original focalizations of tubercle bacilli occur in them.

Unfortunately, in approximately 95 per cent of persons who react to tuberculin, no phase of the remainder of an examination is capable of determining the location of the lesions in various organs including the lungs. Those in the lungs are not found by x-ray film inspection because they are too small and do not have the necessary consistency to obstruct x-rays. Moreover, 25 per cent of the lung is obstructed from view on x-ray films by shadows of other structures such as the diaphragm and the heart. These initial lesions in such organs as the liver, the kidneys and the brain do not lend themselves to satisfactory x-ray film inspection, and therefore cannot be located by our present technics for examining the living body. For example, a woman approximately 50 years of age, a physician actively engaged in the practice of medicine, had long been a reactor to tuberculin and had had a mild lymph-node involvement. There was no way of knowing that at least one focus existed in her liver until she died from a hepatic abscess. Moreover, the tuberculous nature of the abscess was not recognized until necropsy was performed.

Most physicians who have practiced medicine for many years have seen individuals who reacted to tuberculin but who were not known to have calcified tuberculous lesions in the brain until necropsy was done following their deaths from tuberculous meningitis.[13] Such situations are not unlike those that occur in various other parts of the human body.

Most careful examinations of recent tuberculin converters, regardless of age, reveal the locations of primary lesions in the lungs of only about five per cent. On the other hand, a high percentage of primary lesions which appear in the skin or within or in visible parts of orifices such as the nose and mouth can be diagnosed by direct vision followed by bacteriological studies sometimes including biopsy.

The importance of the tuberculin reaction is obvious even in the person who is apparently in perfect health at the moment and in whom all other phases of the examination are unrevealing, since within the body of such an individual lie the potentialities for various subsequent forms of tuberculosis. Not only should a complete examination be given to persons found to react to tuberculin in any age of life, but periodic reexaminations should be given them as long as their tissues are sensitive to tuberculin. Only by these procedures is it possible for the physician to be on the scene when he can do most to control clinical lesions as they evolve.

This was demonstrated more than 25 years ago when it was shown that periodic examinations of adult tuberculin reactors would reveal evolving chronic pulmonary lesions on an average of more than two years before they made their presence known by symptoms, and long before they were contagious and when they could be treated highly successfully. Years before anti-tuberculosis drugs and resectional surgery became available, periodic x-ray films of the chests of tuberculin reactors brought to light evolving clinical lesions as soon as they were large enough and dense enough to cast visible shadows on films. Treatment at that time nearly always controlled the lesions before they became contagious, prevented symptoms from appearing and provided an excellent result with a minimum of the individual's time. This procedure based on finding persons harboring tubercle bacilli, watching for clinical lesions to evolve and treating them as soon as the diagnosis was established, together with other phases of the management of persons with tuberculosis, justified the statement that everything that was needed to control and ultimately to eradicate tuberculosis was known and was in use. There are literally thousands of people in this country whose lesions were found and managed in this way who thereafter began and continued to live normal lives. To the treatment of those days, there was later added anti-tuberculosis drugs capable of suppressing tubercle bacilli and resectional surgery as seems indicated for residuals, especially cavitation.

Without the tuberculin test, this would not have been possible, for most persons with clinical tuberculosis would not have been examined until their sense of well-being was gone. By that time, approx-

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imately 85 per cent would have had advanced contagious disease with doubtful to bad prognosis.

DRUG THERAPY FOR REACTORS IS OF DOUBTFUL VALUE

Whether the procedure now being used by some physicians is right or wrong, only time and experience will tell. This consists of administering anti-tuberculosis drugs to recent tuberculin converters. The use of present drugs for that purpose is seriously questioned by students of tuberculosis on the ground that these agents are not dependable germicides. Although they are usually good suppressants of tubercle bacilli, there is reason to believe that when drugs have been discontinued after long periods of administration, the suppressed tubercle bacilli are likely to revive and become just as dangerous to the subsequent health of the individual as they would have been if the drugs had never been administered. Indeed, they may become more dangerous, for having acquired resistance they might not respond to the major drugs if clinical lesions subsequently developed.

The proponents of drug administration for recent converters contend that by suppressing tubercle bacilli one lessens the likelihood of the acute forms of disease which occasionally appear soon after the tissues become highly sensitized—entities such as pleurisy with effusion, meningitis and miliary disease. The opponents, on the other hand, contend that these forms occur so rarely among recent converters as to make administration of drugs to all of them unprofitable. Moreover, they point out that the reinfection acute forms often respond well to anti-tuberculosis drugs, and therefore that all such drug administration should be withheld until acute clinical forms of disease appear in a very small percentage of recent converters. This conservatism, they think, is justified despite the possibility of an occasional complication of primary pulmonary infiltrates, consisting of involvement of bronchi, enlargement of lymph nodes, etc., resulting in atelectasis. To date, the number of observations has been too limited and their duration has been too short to permit the drawing of conclusions.

There can be no doubt that the policy of treating recent converters will be perfectly sound as soon as a dependable and safe germicidal drug becomes available. At the time of conversion, the lesions are nearly always small and vascular. Therefore, a germicide in the blood stream could be expected to reach all tubercle bacilli and all of the multiple lesions in the patient's lungs, and thus cure the disease by eliminating all tubercle bacilli.

After tuberculin conversion, the interval during which such a cure might be expected is not known. How soon that characteristic in the pathology of the tuberculous lesion occurs—namely, the elimination of blood supply—has not been determined, nor is it known whether it varies from person to person or from lesion to lesion in the same individual. In any event, once the blood supply is lost, tubercle bacilli in such avascular regions would most likely be safe from any drug, regardless of its germicidal qualities or its concentration in the blood stream. That tubercle bacilli remain viable in such avascular areas has been demonstrated by finding them alive and virulent in necrotic lesions of bodies of persons exhumed four months after embalming.

This fact places the tuberculin test far in the ascendency among all known procedures, since it alone can determine the presence of tubercle bacilli and the lesions harboring them within a few weeks after their invasion of the human body.

TUBERCULIN IS OUR BEST EPIDEMIOLOGIC TOOL

The tuberculin test is our best epidemiologic procedure. A reaction is proof positive that the reactor has been in contact with a person who is eliminating tubercle bacilli. However, when an adult reacts to the first test administered, there is no way of determining when the invasion occurred, but when an infant reacts or an older person converts during periodic testing at sufficiently short intervals, one is on a warm trail of the contagious case. By examining the individual adult contacts (children rarely develop contagious tuberculosis), one can apprehend the offender with sufficient frequency to justify searches in all such cases.

In Kansas City, Furcolow *et al.*[14] found 12 times more clinical cases of tuberculosis by examining the adult contacts of tuberculin reactors among kindergarten and first grade school children than had ever been found by any other method, including mass x-ray survey.

Gray and co-workers,[15] by examining adult contacts of tuberculin-reactor school children in St. Louis, reported discovering 13 times more clinical contagious cases of tuberculosis than had ever been found by any other procedure.

Diehl and Boynton practically eliminated clinical tuberculosis among students in schools of nursing[16] and medicine[17] by periodically retesting all of the individuals who had been non-reactors on admission and seeking the sources of infection for those of them who converted while in school. They were thus led to sources that had not previously been investigated in affiliated hospitals, in special tuberculosis services, in other institutions, and in the various departments within their own hospital schools, including bacteriology, pathology, medicine, surgery, etc., etc. Once these sources had been determined, they could be eliminated from teaching services or corrected, and thus subsequent generations of students were protected against tubercle bacilli. The effectiveness of a contagious disease control technic in tuberculosis could be determined only by periodic testing of the non-reactors after they had been admitted to and after they had left the service.

The only sound economy, both medically and financially, is practiced by working with persons who are harboring tubercle bacilli, and the only way to find all of them is by observing their re-

actions to tuberculin. The only way it can be known how many persons a contagious case of tuberculosis infects is by testing the contacts with tuberculin.

TUBERCULIN TESTING HELPS DETERMINE LEGAL RESPONSIBILITY

The tuberculin reaction is the only accurate method of determining legal responsibility for the illnesses of persons who develop clinical tuberculosis while working in places where the disease is compensable by law. At least according to one such statute, the employer in whose place of business an individual happens to be working at the time a clinical lesion is found is responsible and therefore must provide compensation. Obviously, no student of tuberculosis participated in the drafting of that bill. As a result of it, much injustice may have been done organizations and institutions that were not in the least to blame for the lesions which occurred among the people in their employ.

A girl who entered a school of nursing will provide a good example. The first year of her course was given in a college. On entrance and on completion of her first year, she was tested but did not react to tuberculin. She was then transferred to a hospital where the remainder of the nursing course was given. On admission there, she did not react to tuberculin. During her first year at the hospital, she was assigned to an elderly patient who had been admitted with a diagnosis of lung cancer. Approximately a week after his admission, the laboratory reported that in addition to finding cancer cells it had found numerous acid-fast bacilli in his sputum. Thus, the student had been in intimate contact with an ill, elderly contagious case of tuberculosis for about a week. Six weeks later she reacted strongly to tuberculin. X-ray films then and every three months until her graduation revealed no evidence of disease. She took a position in another hospital where all tuberculin reactors among the personnel were required to have x-ray film inspections of their chests every six months. The first few inspections of this nurse's chest revealed no evidence of disease, but then a small, faint-shadow-casting lesion began to make its appearance in the upper lobe of one lung. It evolved slowly, and in due time acid-fast bacilli were recovered from gastric washings.

Impulsive and unknowing individuals immediately blamed the hospital where she was working, but a careful search of the record of every patient admitted to that institution since she was first employed there revealed none with pulmonary or other clinical tuberculosis. Thus, there was no evidence for those who insist that exogenous reinfections are responsible for such cases. The case was so well documented from the time the invasion of tubercle bacilli occurred that the Industrial Commission ruled that the hospital where she had come in contact with the contagious case of tuberculosis was responsible. The case was appealed, and the Supreme Court ruled that the responsibility rested with the college that provided the course in nursing and had sent her to the hospital where she became infected.

REPEAT TUBERCULIN TESTS MUST BE GIVEN TO ENTIRE POPULATIONS

Only the tuberculin test can determine the magnitude of the tuberculosis problem among the people of any group. Mortality and morbidity rates are not good criteria. Not all persons who have tuberculosis die from that disease, and not all persons who have clinical tuberculosis have it diagnosed and recorded, but *all persons who react to tuberculin have at least primary tuberculosis, the forerunner of the clinical disease.* Therefore, the magnitude of the problem in any group or community is determined by the number who react to tuberculin, for it is they and those whom they may infect who provide the clinical cases of the future. *In no community, county or state is the magnitude of the tuberculosis problem known until the entire citizenry has been tested with tuberculin and all persons harboring tubercle bacilli have been so located.*

Until the magnitude of the problem has been determined, it is impossible to develop a satisfactory eradication program. In only a few places have attempts been made to determine the magnitude of the tuberculosis problem accurately. In all others, tuberculosis work has continued in a more or less hit-and-miss fashion.

In a few places, after a community-wide or county-wide educational campaign, the tuberculin test has been offered to every citizen from infancy through senility. Maps have then been made with thumb tacks indicating the location in the area of every person found to be harboring tubercle bacilli by means of the tuberculin reaction. This technic has been exceedingly revealing to people in areas where there has been no recent death from tuberculosis and where the numbers of new cases reported have been so small that tuberculosis workers were considering discontinuing Christmas Seal sales and all other anti-tuberculosis activities. Even in so-called "low incidence" areas, as many as 20 to 25 per cent of people, mostly in the older age brackets, have been found harboring tubercle bacilli, and among them an annual crop of contagious cases is to be expected. Therefore a tremendous problem exists and will continue for a long time before tubercle bacilli are eradicated.

Only the tuberculin test determines accurately the effectiveness of the tuberculosis eradication program. For example, if a community or a county decides to launch such a program, it should first determine the magnitude of its problem and the location of its tubercle bacilli. After the program has been in effect for five years, testing of the girls and boys born during that period and com-

paring their percentage of reactions with those of individuals who were in the same age group just prior to the start of the program will determine more accurately than anything else whether the program is successful.

Whether a tuberculosis control program is succeeding through schools, including colleges and universities, is best determined by testing students from year to year.

The tuberculin test also plays a superior role in differential diagnosis. Contrary to former beliefs, the locations of pulmonary lesions, the x-ray shadows that they cast, etc. are not pathognomonic. Neither are symptoms or physical signs. An individual who has a demonstrable pulmonary lesion and does not react to tuberculin in adequate doses, however, probably does not have tuberculosis. The known exception is the person who has rapidly progressive tuberculous disease approaching termination, when the allergy is depressed. Even such persons, however, will react if sufficiently large doses are administered. One must also include elderly individuals with demonstrable, long-standing lesions, in whom no reinfection has occurred in recent years to whip up allergy. Although in such cases the usual test doses do not result in reaction, sufficiently large doses will elicit sensitivity.

CONCLUSION

Thus, the tuberculin test is the master key that opens every door leading to the goal of tuberculosis eradication. Without this test, there could be no hope of eliminating the tubercle bacillus.

We are fortunate that all necessary basic research has been done so that the essential information and the armamentarium are available for the eradication of tuberculosis. In some other diseases, especially cancer, *research* must be the watchword. The causes are not yet known, and therefore workers in those diseases are in the position that tuberculosis workers occupied before 1882. But for tuberculosis, the basic research of Koch and others resulted in determining the cause, specific diagnostic measures, good treatment and adequate preventive measures. We are therefore in a position to confine ourselves to applied research—the finding of optimal methods for using what has been learned through basic research. Even a large volume of applied research has already been done, and methods of unquestioned value are already in use. Theories and speculations leading to controversy and waste of time and effort have been overthrown.

Despite all that has been learned, and despite the fact that we have long known all that is necessary and have assembled the armentarium for the eradication of the tubercle bacillus, we are now traveling probably the most difficult part of the road leading to our goal. In fact, we have taken such great strides that large numbers of people, including many professional workers, seem to feel that the present momentum will carry our program to complete success without a further expenditure of effort. One is reminded of the late afternoon of a day early in World War I, when the German army marched to the outskirts of Paris and could have passed into the city almost unopposed. However, the officer in charge decided to wait until morning before marching his forces in triumph through the streets. However, when morning had come and all was prepared for the march, it was impossible. The Parisian men, women and children had devoted the night to preparations for preventing that triumphal entry.

The army against the tubercle bacillus is now almost in the same position that the German forces occupied outside Paris. The present false sense of security and our egotistical attitude toward our accomplishments to date have slowed or interrupted our march. There is considerable danger that we may never attain our objective. The funds that were collected for the campaign against tuberculosis are in danger of being dissipated upon numerous activities in unrelated fields, despite the fact that the money now available is far from enough to complete the work of eradicating the tubercle bacillus! The remaining problem, indeed, is of such magnitude that Christmas Seal receipts must be supplemented by huge sums of money from other sources!

I am fully aware that what I have said is thoroughly familiar to you, the members of the Iowa Trudeau Society. My aim has been to refresh these points in your minds, and to point out facts which it is our duty to convey to physicians in every phase of medical activity, and especially to that ever-important group in general practice. They far outnumber all of the rest of us in the medical profession, and they are in strategic situations. Their influence upon the citizenry with reference to health issues is unsurpassed. They are well equipped from the standpoint of training and experience. They will welcome our leadership, and will enter enthusiastically into our fundamental campaign to eradicate tuberculosis.

Veterinarians, who know more about the tuberculin test than do physicians in human medicine, are just as interested in eradicating tuberculosis from human beings as from animals. No veterinarian should be omitted from the campaign to wipe out all pathogenic types of tubercle bacilli.

In this country, no group of physicians working in a disease-control program are more fortunate than those who are planning the attack on tuberculosis. This fact is well demonstrated in the State of Iowa, where not only special groups such as the Trudeau Society, but the medical profession of the entire state has the assistance and support of the Iowa Tuberculosis and Health Association. Mr. Paul Williamson, the executive director of that organization, is one of the best informed persons on tuberculosis in the country. He sees the problems, and he knows how to solve them.[18] He and his organization can do much that physicians can-

not do, such as providing information for the citizenry everywhere, organizing tuberculosis eradication campaigns, conducting surveys, etc., etc., etc. I do not know of an executive director in this country who is carrying on these various statewide activities in cooperation with all of the others who are concerned in a more effective manner than Paul Williamson.

He established the first tuberculin registry in the United States in 1954. He was among the first to promote county-wide tuberculin testing. His organization, in cooperation with the Iowa Trudeau Society, was one of the first to adopt certification of schools with the American School Health Association, as well as to promote county-wide tuberculin testing surveys.

Certification of schools offers tremendous promise by way of stimulating interest in activities among the school children and the educators in any state. If a school is to satisfy the qualifications, everyone must participate in the program, and there is nothing like participation as a means of gaining and becoming anxious to help disseminate information. A most interesting psychology develops among children and school employees alike in schools that are working for certification. All concerned will go to almost any lengths to win an official certificate from their state tuberculosis association and from the American School Health Association.

Thus, the most modern, thoroughly sound tuberculosis eradication procedures are operating in Iowa fully as well as in any other state, and much better than in most states.

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DYSMENORRHEA AND PREMENSTRUAL TENSION HEADACHES

Dr. Amos S. Wainer, of the Castallo-Wainer Clinic for Women, in Philadelphia, told a conference sponsored by the New York Academy of Science on December 5 that phenyramidol (Analexin®, Irwin, Neisler) provided excellent or good results in 45 out of 50 cases of dysmenorrhea, and that four of the five patients who failed to respond were found to have ovarian cysts that explain the failure.

He said that phenyramidol also provided good to excellent results in 40 out of 45 patients treated for premenstrual tension headaches. He used a combination of phenyramidol and aspirin as a substitute for codeine and aspirin in postpartum analgesia, and in 100 patients the only side effect observed was one case of allergic reaction to aspirin. "Phenyramidol may be substituted in postpartum analgesia for codeine and aspirin as it is used today," he declared, "and [it] is a welcome change [from] dispensing narcotics."

FOR SHOWINGS TO MEDICAL ASSISTANTS AND DOCTORS

The key role played by the physician's medical assistant in creating good public relations is emphasized in a new film now available for showings to medical societies and medical assistants' groups. Entitled "First Contact," the 26-minute dramatic color film shows the mistakes a new office assistant can make unless she is properly trained for her job, and points out that medical assistants' groups provide opportunities for increasing on-the-job efficiency.

"First Contact" was premiered before 500 members of the American Association of Medical Assistants holding their third national convention in Philadelphia October 16. Prints are available to medical societies through the AMA's Department of Medical Motion Pictures and Television, and to medical assistants' groups through the American Association of Medical Assistants, 510 North Dearborn Street, Chicago 10.

The film was produced for the AAMA, in cooperation with the AMA, as a special service of Wyeth Laboratories, and it can also be obtained from the Wyeth Film Library, Box 8299, Philadelphia 1.

Clinical Evaluation of

The Oral Hypoglycemic Drugs

DANIEL B. STONE, M.B. (Lond.), DPM, ROBERT C. HARDIN, M.D.,
OSCAR C. BEASLEY, M.D., IOWA CITY, AND GLEN W. HARVEY, M.D., CEDAR RAPIDS

THREE GROUPS of drugs have been used clinically to reduce blood sugar in man: insulin, the sulfonylureas and the biguanides. The medical literature abounds with reports of other hypoglycemic agents. We shall discuss the current status of the effective, practical compounds that may be taken by mouth, first the sulfonylureas and second the biguanides.

THE SULFONYLUREAS

Carbutamide. In 1942, Janbon and a group of other French physicians[1] observed that some patients receiving a new sulfonamide for typhoid fever became hypoglycemic. Subsequently, Loubatieres and his colleagues[2, 3] studied the mode of action of this drug and its congeners, but did not use it in the treatment of diabetes. In 1954, two groups of German physicians[4, 5] used another sulfonylurea, carbutamide, for treating diabetes. It lowered the blood sugar of diabetics, but in this country about 5 per cent of patients developed toxic side effects, including skin rashes, nausea, vomiting, agranulocytosis and liver damage with jaundice.[6] Eight deaths were attributed to the drug, and it was withdrawn from use. German physicians continued using carbutamide, however, and have reported fewer side effects.

Tolbutamide. This drug (Orinase®) was introduced for general use in 1957. It is less toxic than carbutamide.

Pharmacology: Despite much study,[7,8] the mode of action of the sulfonylureas is unknown. There are two commonly accepted explanations. (1) Tolbutamide enhances the production or release of insulin from the beta cells of the pancreatic islets. The sulfonylureas are ineffective in the absence of insulin, in animals or human beings that have been completely depancreatized, and in juvenile diabetics[9] who secrete little or no insulin. Experimentally the sulfonylureas augment the insulin-like activity of pancreatic venous blood.[10] (2) The sulfonylureas appear also to inhibit the hepatic synthesis of glucose or the release of glucose from the liver.[11, 12] This finding alone does not explain their effect, for tolbutamide is effective even in the hepatectomized animal.[13] Although the sulfonylureas are thought to enhance the production of endogenous insulin, there is no evidence that they produce any of the other metabolic effects of insulin apart from hypoglycemia. These drugs are not substitutes for insulin in that they do not increase glucose entry or utilization in the cells of insulin sensitive tissues.

Toxic Effects: Tolbutamide has not been known to produce severe toxic effects in man, although large doses damage the liver of the depancreatized dog.[14] Eleven of the first 5,000 patients who received tolbutamide developed leukopenia, with white blood counts of 1,800 to 3,000. Aplastic anemia has been reported in one patient,[15] as has jaundice,[16] but in neither was tolbutamide proved to have been responsible.

Side Effects: These occur in about 3 per cent of patients, and include anorexia, nausea, vomiting, mild skin eruptions, headache, weakness, paresthesia and intolerance to alcohol.

Indications: The drug should not be used if diet suffices to control diabetes. Usually, tolbutamide is effective only in middle-aged and elderly patients with moderate insulin requirements.

The efficacy of tolbutamide may be judged in two ways: by clinical trial (see administration and dosage) or by the sulfonylurea response test introduced and developed by the Joslin Clinic group.[16]

The sulfonylurea response test is performed as follows:

(1) For adult patients requiring less than 15 units of insulin daily, omit insulin for the two days preceding the test. For patients taking more than 15 units of insulin daily, or if it seems dangerous to stop insulin, give crystalline insulin (regular insulin) in appropriate doses during these two days, in order to avoid insulin effect on the day of the test.

(2) On the day of the test, withhold insulin and food until the test in finished.

(3) Obtain a fasting blood sugar.

(4) Give 3 Gm. of tolbutamide by mouth.

(5) Obtain the blood sugar four hours later.

A satisfactory sulfonylurea response test is one which lowers the blood sugar level to 110 mg., venous blood, by the Somogyi-Nelson technic. The results often predict the response to tolbutamide therapy. A satisfactory response indicates that the drug will probably control the patient's hyperglycemia. Failure of the blood sugar to fall during the test constitutes reliable grounds for predicting the "primary failures"—patients who will not re-

Dr. Stone is an assistant professor, Dr. Hardin is a professor, and Dr. Beasley is a former instructor in the Department of Internal Medicine at S.U.I.

spond favorably to the drug. The test does not provide reliable grounds on which to predict "secondary failures"—patients whom the drug will control for a month or more, but who subsequently will develop increasing glycosuria and require insulin. The test has proved extremely useful as a screening procedure.[16]

Contraindications: In general, tolbutamide is contraindicated in those who are likely to develop ketosis or acidosis. The contraindications include:

(1) Juvenile diabetes (Tolbutamide does not often control patients who have developed diabetes before the age of 40 or who require more than 30 units of insulin.)

(2) A history of diabetic acidosis

(3) Major surgery (Minor surgery such as cataract extraction does not contraindicate tolbutamide.)

(4) The presence of complications, including ketosis, acidosis, infection, severe trauma, disease of the liver, thyroid gland or kidneys, or any other condition which greatly increases insulin requirements

(5) Pregnancy.

Administration and Dosage:

(1) The patient should adhere to a diet commensurate with his weight and physical activity.

(2) All patients are given 3 Gm. on the first day of tolbutamide treatment; 2 Gm. on the second day; and approximately 1 Gm. daily thereafter. The daily maintenance requirement is 0.5 to 1.5 Gm. Most patients receive 1 Gm. daily. Tolbutamide gives an effective blood level for eight to 10 hours. It is usually given as a single dose before breakfast, but if there is nocturnal glycosuria, the daily intake may be divided into a larger dose in the morning and a smaller dose in the late afternoon.

(3) Insulin must never be withdrawn abruptly from patients who have been receiving it. If the patient has been taking less than 30 units daily, insulin should be reduced by 30 to 50 per cent daily, provided that urine tests and blood sugars remain satisfactory. If the patient has used more than 30 units of insulin, it is desirable to admit him to the hospital for trial of tolbutamide therapy. The insulin is reduced by 20 per cent on the first day, and may then be reduced cautiously every second or third day, with careful observation. Hyperglycemia, glycosuria or increasing ketonuria indicate that tolbutamide should be stopped and maintenance insulin resumed.

In some patients, tolbutamide is partially effective, but does not replace insulin completely. Such patients should be maintained on their previous requirements of insulin without tolbutamide, for combined therapy has not been proved valuable.

Chlorpropamide (Diabinese®). This is the latest of the sulfonylureas to be released. It has a chlorine atom on the benzene ring in place of the methyl radical of tolbutamide (Figure 1). Tolbutamide is inactivated in the liver, whereas chlorpropamide is excreted unaltered by the kidneys and has a longer biological half-life. In clinical practice, the hypoglycemic effectiveness of chlorpropamide appears to be two to five times that of tolbutamide.[17-19] Although chlorpropamide produces greater hypoglycemia than does an identical dose of tolbutamide, one must not conclude that it is necessarily preferable. The crucial question concerns the incidences of side effects when doses of equivalent therapeutic effectiveness are used. The two drugs appear to have identical pharmacologic modes of action.

THE SULFONYLUREAS

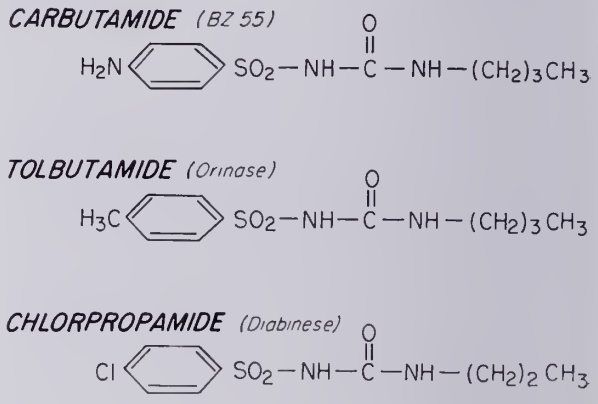


Figure 1

Toxic Effects: These appear to be more common than with tolbutamide. Transient leukopenia may occur, and one case of thrombocytopenic purpura has been observed. Of a group of over 5,000 patients, 13 have been reported developing jaundice.[20]

Side Effects: These are more varied and more frequent with chlorpropamide, including nausea and vomiting, abdominal discomfort, skin rashes and pruritus, chest pain, muscle weakness, a peculiar taste, intolerance to alcohol, and hypoglycemic reactions. These mainfestations may subside without cessation of therapy.[21]

Indications: They are the same as for tolbutamide. Lee, Schless and Duncan[21] reported that good control can sometimes be achieved with chlorpropamide after tolbutamide has proved ineffective. Both are more likely to be effective in the middle aged and elderly, with diabetes of less than five years' duration and of moderate insulin requirements. Both have been reported to reduce the insulin requirements of the rare patient with insulin resistance.

Contraindications: The contraindications are those for tolbutamide. In addition, present evidence suggests that the drug should not be used for patients with liver disease.

Administration and Dosage:

(1) All patients should adhere to a diet commensurate with their weights and accustomed physical activities.

(2) The initial dose is 500 mg. daily (250 mg. daily in elderly patients). This is increased or decreased every three to seven days according to the clinical and laboratory response. The maintenance dose is usually 100 to 750 mg. daily. Maintenance doses less than 500 mg. daily reduce the incidence of side effects.

(3) Insulin should be withdrawn slowly and cautiously, as with tolbutamide.

Dangers: Chlorpropamide has two dangers. Large doses may cause liver damage. The prolonged powerful action may cause severe hypoglycemia.

THE BIGUANIDES

The biguanides differ from the sulfonylureas in both chemical structure and pharmacologic action. Three biguanides have been used in clinical trials: (1) phenethylbiguanide (PEBG), (2) amylbiguanide (ABG), and (3) isoamylbiguanide (IABG). The first (PEBG) is now generally available as DBI (Fig. 2). The designation is an abbreviation of "DiaBetic No. 1," a term used during the early investigations of this compound.

***PHENETHYLBIGUANIDE** (DBI)*

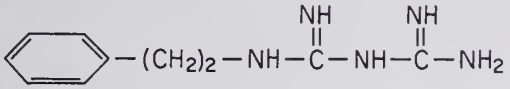


Figure 2

Ungar and his colleagues[22] developed DBI, and reported in 1957 that it lowered the blood sugar of several animal species and of alloxan diabetic animals. Pomeranze[23] first showed that DBI controls hyperglycemia in the diabetic.

Pharmacology: Like the sulfonylureas, the biguanides produce hypoglycemia without simulating the other metabolic effects of insulin. In contrast to the sulfonylureas, they do not increase the production or release of insulin. The blood sugar is lowered in the alloxanized or depancreatized animal and in those patients with diabetes mellitus who have minimal pancreatic function. The biguanides are thought to inhibit some of the enzymes concerned with oxidation in the tricarboxylic acid cycle.[24-26] The resulting anaerobiosis increases the peripherial uptake of glucose and accelerates the anaerobic glycolysis of glucose in the tisses. Conversion of glucose to glycogen or fat is decreased, and lactic acid accumulates. The biguanides appear also to depress the production of new glucose in the liver.

Toxicity: DBI has not been reported to damage the liver, kidney or bone marrow either in the experimental animal or in man.

Side Effects: These are anorexia, nausea, vomiting, abdominal pain, fatigue and a metallic taste in the mouth. The reported incidence varies from 12 to 45 per cent.[27-29] In a series of 50 patients whom we studied,[27] we concluded that side effects were less common when the drug was given cautiously and the dose increased slowly.

Indications: Clinical trials with DBI continue, but one fact emerges. The drug appears to have wider applications than have the sulfonylureas. Present information about the biguanides is as follows:

(1) In adult-onset diabetes, DBI alone lowers the blood sugar effectively in most patients, but often has to be abandoned because of the gastrointestinal side effects. DBI is most likely to succeed in the elderly patient who needs small amounts of insulin and whose diabetes is of short duration. It apears to be more potent than tolbutamide and chlorpropamide, however, and it sometimes controls hyperglycemia in patients with adult-type diabetes of long duration and large insulin requirements.[27] It may be effective in those who have not responded to the sulfonylureas.

(2) Most observers agree about the effects of DBI in juvenile diabetics. Krall, White and Bradley[28] studied the responses of 72 patients with growth-onset diabetes. Of that number, 89 per cent had significant lowerings of blood sugar; 19 per cent were controlled on DBI alone; and 22 per cent needed less insulin when receiving DBI. We have confirmed a number of reports that DBI sometimes improves control in juvenile diabetics, although the patients need to continue taking insulin. At this time, we believe that DBI should be given to juvenile diabetics with caution. If it is intended that DBI should replace insulin, the patient should be hospitalized or observed several times daily. If it is hoped that DBI, as a supplement for insulin, will improve control, the patient need not be admitted to the hospital, but should be observed carefully because of the danger of vomiting. We have not given DBI to juvenile diabetics who were well or moderately-well controlled except in clinical, experimental trials, and do not regard its routine clinical use in such patients as justifiable.

Administration and Dosage: DBI must be given cautiously.

(1) In newly-diagnosed adult diabetes, DBI is started at a dose of 25 mg. twice daily with meals, and increased by 25 mg. every three days according to the response. If the patient is taking more than 30 units of insulin daily, the insulin should be withdrawn slowly. Insulin should be reduced by not more than 25 per cent of the original dose on each occasion, and should be reduced every third day. On the first day of insulin reduction, DBI is started in initial doses of 25 mg. twice daily, and the daily dosage is increased by 25 mg. every three days.

(3) Juvenile and brittle diabetics should be started on a DBI dosage of 25 mg. twice daily with meals, along with the usual daily insulin requirements. The effect of DBI superimposed upon the effect of insulin should be observed. The dose of DBI may be increased by 25 mg. every three days, and at the same time the insulin dosage may be reduced by 10 per cent. These reductions may be continued until the best possible stabilization has been achieved.

Dangers: Rarely, acidosis may progress quickly during DBI therapy, especially if the patient has vomited. Some patients who have developed acidosis quickly have been extremely sensitive to insulin, so that small doses of insulin have corrected the hyperglycemia and acidosis. This is not an invariable rule, however. Odell and others[29] described two such patients receiving DBI who developed acidosis quickly but responded to less than 50 units of insulin. But, on the contrary, one of our patients who developed acidosis rapidly after vomiting required 425 units of insulin to relieve acidosis.[27]

SUMMARY AND CONCLUSIONS

The properties of the oral hypoglycemic agents are summarized in Table I.

The oral hypoglycemic agents should never be used simply because a patient does not wish to adhere to a diet. Both groups of drugs are of restricted value. The sulfonylureas usually control the mild elderly diabetic. The biguanides appear more powerful, but side effects limit their usefulness. Neither group has the metabolic effects of insulin, and nobody knows what their long-term effects will be. The oral hypoglycemic agents are thus useful and interesting, but they should be accepted with reservations and used with care.

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TABLE I

Drug	*Carbutamide*	*Tolbutamide*	*Chlorpropamide*	*Phenethylbiguanide*
PROPRIETARY NAME	BZ 55	Orinase	Diabinese	DBI
GROUP	Sulfonylurea	Sulfonylurea	Sulfonylurea	Biguanide
PHARMACOLOGY	(1) Enhance insulin output (2) Reduce hepatic synthesis or release of glucose			(1) Increase peripheral uptake of glucose (2) Accelerate anaerobic glycolysis (3) Decrease hepatic gluconeogenesis
TOXIC EFFECTS	Agranulocytosis Jaundice	? Never	Rarely Jaundice	Never
SIDE EFFECTS	5%	3% Gastrointestinal	? 5-10% Gastrointestinal Skin, Hypoglycemia, Neurological	12%-45% Gastrointestinal
STATUS	Withdrawn U.S.A.	Available	Available	Available
MAINTENANCE DOSE		0.5-1.5 Gm.	200-750 mg.	50-200 mg.
INDICATIONS		Adult-type diabetes Short duration Moderate insulin requirements		Adult-type diabetes
CONTRAINDICATIONS		(1) Juvenile diabetes (2) Presence of complications (3) History of acidosis		Use extremely cautiously in growth-onset diabetes

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Construction Projects at the S.U.I. Psychopathic Hospital

Preliminary budgets for constructing and equipping two structures at the S.U.I. Psychopathic Hospital were approved on December 11 by the State Board of Regents. Funds for the two projects, a research addition to the present building and a separate but connected unit for emotionally disturbed children, will come from state appropriations augmented by U.S.P.H.S. grants.

The 58th General Assembly appropriated $235,000 for the research wing, and the federal government is to contribute a like amount. For the emotionally disturbed children's unit, the state appropriated $170,000, and the U.S.P.H.S. added $85 000.

Dr. Paul E. Huston, professor and head of psychiatry at S.U.I. and head of the Psychopathic Hospital, said the new research addition is needed to provide facilities for studies of the cause, prevention and treatment of mental disorders, and to improve the training of research personnel in the field of mental health. He went on to say, "We have acquired a number of excellent physicians in the past few years. We have a two-way phone program which permits the state mental institutions to share in some of our scientific meetings. We have set up new interdepartmental teaching programs in the College of Medicine which strengthen our medical graduates in their understanding of mental and emotional disorders. But we have had no research laboratory space. This addition will provide such space."

The ground floor of the addition will contain an observation laboratory, an epidemiological statistical center, a psycho-neuro physiological laboratory, four soundproofed laboratories, an electronics and equipment shop, a rest room and two staff offices. A large classroom will be included as an alternate bid, to be accepted only if the funds are adequate. The first floor will contain six staff offices, rest rooms, two office-laboratories, a section for experimental work with animals, and six laboratories for the study of human behavior, alcoholism and the biochemical factors in mental disorders.

Dr. Huston said that the need for an emotionally-disturbed children's unit has been a long-standing one. The new building, which will be located north of the research addition and connected with it by a corridor, will permit the University to move ahead in this vitally important field. The new unit, he explained, will be used in training professional personnel to treat mentally ill children and prevent them from having more serious disturbances in later life.

The ground floor of the three-story building will contain a mechanical equipment room, rest rooms, a storage room, a library room, four offices, a play room, and six rooms for examinations, interviews and observations. The first floor will consist of a reception room, two offices, a visitors' waiting room, rest rooms, a classroom, and a living, feeding and kitchen area. The second floor will house a nurses' station, a utility room and rest rooms, the remainder being devoted to sleeping rooms and patient care rooms to accommodate approximately 27 children.

The Use of ACTH and Steroids in
Rheumatoid Arthritis and Allied Conditions

LYSLE H. WHITMER, M.D.

MUSCATINE

When we of the Class of 1934 wore our white coats for the first time and made our rounds of the various services at University Hospitals, we found endless beds filled with people suffering pneumonia, mastoiditis, osteomyelitis, tonsillitis, peritonitis, meningitis, urethral stricture, pelvic inflammatory disease, septicemia, tuberculous osteomyelitis, poliomyelitis, tabes, paresis, scarlet fever, puerperal sepsis and a host of complications from those conditions. Will any of us ever forget the blow bottles that were used by empyema patients?

It might be enlightening once again to put on our student coats and make ward rounds at this hospital to see what kinds of patients now occupy those beds. No doubt some of the same diseases would be represented there, but I'll wager their numbers would have been drastically reduced. Furthermore, some on the list have become medical curiosities. Twenty-five years ago, I'd have thought that when a majority of those diseases had been eradicated, we'd be entering a medical Utopia. Yet, strange to say, those beds and many news ones besides are constantly filled with suffering humanity.

NEW NAMES FOR OLD ACQUAINTANCES

In Osler's PRINCIPLES AND PRACTICE OF MEDICINE, our text 25 years ago, rheumatoid arthritis was lumped together with osteoarthritis under the heading "Arthritis Deformans." It was said to be due to infection, and the treatment that was advised—salicylates, heat and orthopedic appliances —would do credit to current authors.

Today, rheumatoid arthritis is grouped with rheumatic fever, disseminated lupus erythematosus, dermatomyositis, scleroderma and periarteritis nodosa, and is called "collagen disease" or, in some quarters simply "group disease." These illnesses have many things in common, clinically, pathologically and in their therapy. In certain instances, time alone may tell the particular one with which the physician is confronted. Thus, the term *collagen disease* is useful, if not exact.

As for etiology, it might be said that the collagen diseases are a villainous group of siblings damed by stress and sired by strain. This concept may be somewhat facetious, but it is important to therapy since the prime ingredient in their successful treatment is the elimination of all avoidable stress and strain.

Dr. Whitmer, a member of the Class of 1934 at the S.U.I. College of Medicine, made this presentation at the All-Medical Alumni Reunion, in Iowa City on June 12, 1959.

EARLY SUCCESSES WITH ACTH WERE PRELUDES TO DISAPPOINTMENTS

Ten years ago, I was privileged to belong to the arthritis clinic headed by Dr. Walter Bauer at Massachusetts General Hospital, in Boston. There, my associates and I were fascinated witnesses as a young woman, moribund with lupus erythematosus disseminata, was brought back to life through the administration of a new agent called adrenocorticotrophic hormone. That rescue was a dramatic example of the potency of the material. At the same time, we were making experimental use of a new steroid called cortisone. It was shown that the pathologic manifestations of a relatively early case of rheumatoid arthritis could be completely reversed. Contiguous sections from an involved joint were removed before and after treatment, providing dramatic "before" and "after" specimens illustrative of the success that had been achieved. The operations, as I recall, were done by Dr. Carroll B. Larson, who is now head of orthopedics here at S.U.I. but was then associated with Massachusetts General Hospital.

But after the first excitement and drama of their introduction, ACTH and cortisone rapidly came into disrepute. In some quarters, their use is still frowned upon. This negative reaction can be readily understood. On the one hand, if you administer ACTH to a patient with collagen disease, you readily reverse the symptoms and signs of the disease. If at that point you stop using the hormone, the disease returns in all its glory as promptly as it disappeared. You then have an extremely unhappy patient. On the other hand, if you continue using ACTH for two weeks or longer, you are bound to get into trouble of one sort or another. Then you and your patient are both unhappy. These unhappy effects are due to the retention of sodium and the loss of potassium, and to the development of "moon facies," "buffalo hump," and if your patient is a female, an altogether unwelcome mustache and an outbreak of acne. These results are certain to follow prolonged treatment with a dosage adequate to control the disease. In addition, you may see peptic ulcer, mental aberrations, and cutaneous hemorrhages or purpura.

If you prefer to use a steroid instead of ACTH initially, you must use relatively large doses to be effective. If you lower the dose to avoid the same unpleasant results that ACTH produces, you then

have unsatisfactory control of the disease except in very mild cases.

BENEFITS HAD TO BE KEPT AND ILL EFFECTS AVOIDED

After I returned to Iowa in 1950, these agents became readily available through commercial channels. But after two or three years of frustration in their use, I was about to give them up entirely and go back to the unsatisfactory but less perplexing methods of treatment that I had previously employed. However, I began reasoning somewhat like this: ACTH is an agent *par excellence* for quickly reversing the symptoms and signs of collagen disease, and there ought to be a way of using it. The disease disappears long before one gets into any difficulties, provided that he uses reasonable precautions. It would be wonderful to stop ACTH at that point and hold the improvement. But how?

The good results are accomplished when ACTH stimulates the adrenals to produce endogenous steroids. In those three or four days, the endogenous production of gluconeogenic hormone must be at its maximum, and not yet overshadowed by the endogenous production of salt hormone and androgenic hormone. Overproduction of the latter two steroids causes most of our difficulties. Perhaps at this point of relative hypertrophy of the adrenals following three or four days of ACTH administration, we could stop the ACTH, give small doses of sugar hormone by mouth and not unduly inhibit the endogenous production of steroid. The oral exogenous steroid would be an additive to the endogenous hormone, and we might thus prevent the prompt return of all the symptoms and signs of disease that frustrated us in the past.

MY SCHEME PROVED QUITE SATISFACTORY

Whether or not my reasoning is sound, I am not prepared to argue. Nevertheless I tried such a program on several patients, and it worked to my own and to their complete satisfaction.

Judging from articles on the subject, other workers in this field use ACTH and the steroids in competition one against the other. My method is to use them in conjunction with one another.

I have now accumulated 450 such cases, and my results have been quite satisfactory over all. The results are certainly not perfect, but they are far better than those achieved by any other method with which I am familiar.

When a case of rheumatoid arthritis, for example, has been diagnosed, and when the patient has been found free of tuberculosis, peptic ulcer and diabetes mellitus, he is told that his treatment will require four or five days of hospitalization. Hypodermic injections of ACTH are then administered for three or four days, depending on the response of the disease. At the end of that period, pills are given for one day, and if all is satisfactory, the patient is dismissed to continue taking the pills at home. He is also told that following his initial treatment, he may be able gradually to decrease his consumption of pills after an interval of freedom from symptoms, since a number of patients have done so and have been free of disease for several years. It is more likely, however, that he will need to take the pills over a period of weeks or months to control his arthritis. If he requires any major increase in his number of pills, he should be prepared to repeat the whole procedure. He is assured that if this is necessary, there is nothing wrong with the medicine, but that after a while he makes less of his own corticosteroid and that his adrenals need to be stimulated once more with ACTH. He is told that these medicines are powerful agents, but that with intelligent use and certain precautions, they are relatively safe.

HERE ARE SOME OF THE DETAILS

If the patient agrees to the treatment, he is hospitalized. A routine laboratory examination is ordered, plus an erythrocyte sedimentation rate determination and daily direct eosinophil counts.

To the nurses, one orders what we term 20 u. ACTH q. 6 hours routine. This consists of (1) a low salt diet; (2) intake and output measurements; (3) daily blood pressure determinations; (4) daily weighings; (5) 15 gr. KCl b.i.d.; (6) 20 u. ACTH (regular) q. 6 hrs.

If circulating eosinophils do not fall 50 per cent in 24 hours, the ACTH dosage is increased 5 u. q. 6 hrs. daily until they do.

If weight increases four pounds or more, the patient is given a diuretic. Hydrodiuril, 50 mg., b.i.d., is in use at present. The same is prescribed if blood pressure increases significantly.

If results of treatment are satisfactory clinically on the third or fourth day, the ACTH is stopped. A steroid the equivalent of 25 mg. of cortisone is given t.i.d. The following have the clinical effectiveness of 25 mg. of cortisone: (1) hydrocortisone 10 mg.; (2) prednisone 5 mg.; (3) prednisolone 5 mg.; (4) methyl prednisolone 4 mg.; (5) triamcinolone 4 mg.; and (6) dexamethasone 0.75 mg. In equivalent doses, they work equally well clinically. Perhaps undesirable side effects are less marked with the smaller tablets, and they may produce less inhibition of endogenous steroid. My reason for this latter feeling is that since adopting the newer steroids, I find that my patients have not required ACTH so frequently.

The patient remains hospitalized at least 24 hours after discontinuing ACTH. By that time, the danger of what we call "let down" following ACTH has passed. This "let down" is characterized by all kinds of bizarre complaints—weakness, weeping, joint pains, palpitation of the heart, nausea, etc. In most cases the "let down" is minimal, and nothing is done about it. In more severe cases, the administration of 40 u. of ACTH zinc or gel will control the symptoms. After 24 hours without

"let down," the patient is dismissed to take a steroid the equivalent of 25 mg. of cortisone t.i.d. He is advised to avoid stress and strain if possible, to avoid all extremes, to rest when tired, to avoid chilling or over-heating, to wear his rubbers and raincoat when indicated, and never to "run on his nerve." He is told to treat upper-respiratory and other infections with respect, and not to try to prove how "tough" he is. He is requested to return for a check-up at 10-day intervals as long as he is under active treatment.

CONCLUSION

In the address "Internal Medicine as a Vocation," which he presented at the New York Academy of Medicine in 1897, Sir William Osler said, "Know syphilis in all its manifestations and relations, and all other things clinical will be added unto you." Syphilis, we hope, is now on its way to oblivion. If Sir William were here today, he might well say, "Know collagen disease in all its manifestations and relations, and all other things clinical will be added unto you."

Use and Abuse of Steroids

GEORGE R. FISHER, M.D.

PHILADELPHIA, PENNSYLVANIA

TEN YEARS AGO, it would probably have been said that the only proper application for adrenocortical steroid hormones was in the correction of Addison's disease, and that any other use was abuse. More recently, we have had to abandon that limited view of their utility, but we have been perplexed by the results they have produced. Almost everyone who receives these drugs feels better—often much better—but eventually almost everyone who receives them is made sick. There is an almost epic quality about this dilemma. Some physicians regard the benefit produced by these materials as illusory—likening them to the favors of a treacherous, blond Lorelei, in pursuit of which one is certain to be cast disastrously onto the rocks. Others equate them with the Golden Fleece—a fabulously rich prize that one can achieve only by braving serious dangers.

No general discussion such as this can provide standard answers for all of the individual problems, for in each case the doctor must weigh the risks against the possible benefits from therapy. Nevertheless, there are a number of considerations which will minimize the dangers of steroid administration in most instances, and which in doing so will widen the area of safe application.

LIPID NATURE OF CORTICOIDS

It seems to me that too little emphasis has been given to the fact that all steroids belong to the general chemical classification of lipids. A lipid is defined as a substance that is not soluble in water but will dissolve readily in ether, chloroform or oils. There are several practical applications for this fundamental. The first of these is that, since serum is essentially an aqueous solution, the steroids cannot be transported by it in their natural state, but are transported in combination with proteins—i.e., as lipoproteins. The lipoproteins behave chemically like proteins rather than like lipids, and thus the essentially insoluble hormones can be transported in solution.

Considerable difficulty has been encountered in finding a solution suitable for intravenous use. Hemisuccinate, which is marketed by the Upjohn Company under the trade name SoluCortef® is one of the few corticoid substances which are both active and water-soluble. Thus it fills a very real need for an intravenous preparation for use in acute adrenal insufficiency, Addison's crises and similar emergency situations. Considerable potency, however, is lost by administering the substance in this form, and I think it is probably true that most physicians who are interested in a rapid pharmacological effect for such situations as status asthmaticus prefer to use intravenous ACTH.

Recently, a suggestion has been made that the transport mechanism of corticoids in the lipoprotein complex may not only facilitate their distribution but may limit the amount deliverable to less than the amount the tissues can utilize. In consequence, gigantic doses of the substances have been employed—doses in the range of 2,000-3,000 mg. daily—in an effort to supersaturate the lipoprotein transport mechanism and bring out an additional effectiveness. A number of claims have been made that cases of acute leukemia that had failed to respond to more moderate doses respond to ones of this magnitude. Though this type of administration is extremely expensive and at the moment rather experimental, it may prove to have a place.

The essentially lipid nature of the corticosteroids has an application in the pharmacology of the preparations for intramuscular use. Since cortisone is almost completely insoluble in water, the cortisone acetate in water is a suspension of crystals which has a fairly prolonged action intramuscularly—somewhere in the neighborhood of 24 hours. It

Dr. Fisher, an internist in private practice, made this presentation at the annual meeting of the Iowa Academy of General Practice, in Des Moines on September 28, 1959.

amounts to the implantation of micro pellets in the muscle. It may seem something of a paradox to those who are accustomed to aqueous penicillin as the rapid-acting form and oily penicillin as a "depot" form, but the generalization can probably be made that all oily solutions of steroids, including the male and female steroids, are fast-acting, and that all aqueous suspensions of such materials are prolonged in action. For this reason also, oral administration of cortisone substances is more rapidly effective than the parenteral, but requires more frequent administration.

PHYSIOLOGIC VERSUS PHARMACOLOGIC DOSAGES

It is important to keep prominent the distinction between a physiologic dose of these hormones and a pharmacologic one. A physiologic dose approximates the daily production by the normal adrenal and thus is the dose which corrects a case of Addison's disease. By this standard, a physiologic dose would be 25 mg. of cortisone daily, or 5 mg. of Metacorten, or 0.25 mg. of fluorohydrocortisone or 0.75 mg. of decamethasone. These are usually given in divided doses—e.g., 12.5 mg. of cortisone twice or three times a day—but I think the pattern justifies the generalization that most of the preparations now available are manufactured with the physiologic dose equivalent to a single tablet daily. In order to avoid a confusion of trade names, we might describe a pharmacologic dose as being five to 10 physiologic doses per day. In choosing a preparation for pharmacologic administration, it is probably best for us to choose one with a minimal tendency towards salt retention, whereas in treating Addison's disease, salt retention is desired. Fluorohydrocortisone causes a great deal of salt retention and thus is the drug of choice in Addison's disease, but it has little utility in other conditions.

Aside from the usual placebo reactions, the administration of small physiologic doses of corticoids has no visible effect upon persons with normal adrenals. This may be a consequence of the corticoids' ability to suppress the natural secretion of ACTH, and a lack of ACTH causes an involution of the adrenal cortex. If this atrophy has not been too prolonged, the relationship between the adrenal cortex and the pituitary is a very sensitive and responsive one. It is more or less fair to say that the administration of 5 mg. of cortisone results in a reduction of 5 mg. in the production of the adrenals. Thus, within the range of normal secretion, dosages of these substances are neither helpful nor harmful. Pharmacologic doses, however, are excessive by definition, and every patient to whom they are administered eventually develops some degree of Cushing's disease.

When we look at the natural history of spontaneous Cushing's disease, we see that very few patients live more than two years without treatment, and that they usually die of infection. They have a tendency to osteoporosis; the calcium from their bones often forms kidney stones; and fractures of the spine are common. They have a tendency to hemorrhage generally, and from ulcers particularly. Many of them become psychotic, and all of them are grotesquely deformed by moon face, buffalo hump, striae and redistribution of weight from the extremities to the trunk. One woman whom I saw recently had gained only 10 lbs., but her brassiere size had increased from 36B to 44C in just three months. Another had developed cavitary tuberculosis just 12 days after having a normal chest x-ray. Others have had equally disastrous experiences.

Cushing's disease in the natural state is severe, but on the other hand we are happily in the position of being able to make artificial Cushing's disease as severe or as mild as we wish, or as the situation seems to warrant. It is unfair to point to a patient with pemphigus or some other fatal disease in whom Cushingoid symptoms are entirely justified and to suggest that equally severe symptoms will necessarily occur in the rheumatoid arthritis patient who receives a much smaller dose of corticosteroids.

Futhermore, reducing the dose of cortisone to the physiologic range doesn't produce mild Cushing's disease; it produces no Cushing's disease at all! A physiologic dose is safe to give in the presence of infection, and we give it routinely in Addison's disease due to tuberculosis of the adrenal glands. Similarly, there is no added hazard in a physiologic dose for a patient who has an ulcer, diabetes or a psychosis. On fairly frequent occasions, a patient may seem to be in adrenal insufficiency, but the presence of an infection makes corticoid therapy appear dangerous. The patient with shock due to a gram-negative septicemia is a typical case of this sort, and the individual with a bleeding ulcer is another. I don't wish to take the position of recommending the routine administration of cortisone to all patients who are in shock, for I believe in no such thing. I merely want to state that there is no harm in administering a small physiologic amount at times when there is doubt. If the patient does have adrenal insufficiency, he will be helped; if his adrenals are normal, they will be no more than mildly and temporarily suppressed. It would seem that when there is doubt about adrenal insufficiency or adrenal exhaustion, it is better to give the patient a small dose of cortisone and perform tests later. To insist upon hormone assays or even eosinophil counts during an acute emergency is undue conservatism, even though most such patients probably have no significant adrenal abnormality. It seems to me that this type of therapy may very well have a limited place. It certainly isn't now being employed so extensively as it would be if its essential safety were better understood.

There are two situations in which chronic administration of physiologic doses of corticoids has been employed with the deliberate intention of

causing adrenal atrophy. One of these is the adrenogenital syndrome in which the adrenal cortex produces excessive amounts of male hormone, and the other is idiopathic hirsutism, in which normal amounts of male hormone are produced but an attempt is made to cause involution of the adrenals and a subnormal production of male hormones. The results in the treatment of the adrenogenital syndrome are strikingly favorable, but I must say that my own results with adrenal suppression in the treatment of hirsutism have been far from convincingly successful, though reports of success can be found in the literature.

CORTICOIDS IN THE TREATMENT OF INFECTION

One of the most bewildering developments in the uses for corticoids has been the recent deliberate advocacy of utilizing large pharmacologic amounts of these materials in the treatment of infection, particularly tuberculosis. It is becoming apparent that corticoids can safely be given in the face of infection, provided that an effective antibiotic has been given first.

There are a certain number of patients whose own defense mechanisms have become self-defeating, and in whom it is more important to reduce the fever of 108°F. or to stimulate the appetite if the patient is debilitated, than it is to augment defense mechanisms. When a tuberculosis patient has been started on streptomycin, INH and PAS, but has failed to respond, corticoids may be life-saving. In tuberculous meningitis, spinal fluid blocks are prevented by such therapy, and the survival rate is improved, once the physician's natural reluctance to the use of cortisone has been overcome. Cortisone is something to think of in every infection that fails to respond to an antibiotic of proved effectiveness. Obviously, this is an area for great caution, but lives can be saved by the proper mixture of judgment and audacity.

POTENTIATION THROUGH PROLONGATION

It seems axiomatic of all hormones that constant administration results in more action than does discontinuous therapy. A constant intravenous drip represents the ultimate in effectiveness, and all other modes of administration are compromises for reasons of convenience. All "depot" forms are thus more effective than quick-acting preparations, milligram for milligram, and administration of small doses every four hours around the clock—night and day—is more effective than the same amount given at two or three convenient times of day. This is a point to remember when the patient complains about the expense of his medication, since he can effect a considerable saving by breaking his tablets into halves and quarters and taking them in fragments throughout the day and night. The degree of inconvenience that he puts up with will thus be of his own choosing.

An important corollary to this axiom is that the same dose is more effective after it has been taken for a week or two than it was on the first day it was administered. This information can be used in two ways. One can tell the patient he must persevere in taking the same dose over a week or 10 days, until the beneficial action of constant administration begins to catch up with his disorder. It seems more reasonable, however, to give the patient whatever dose he requires for the control of his symptoms at first, and then make it a constant policy to reduce the dose on his subsequent visits to the office. In this manner, we come to a therapeutic regimen in which, after the initial control of symptoms, all dose changes are downward except when symptoms have flared up after a previous decrease.

I think it fair to say that the vast majority of patients on steroids are taking more than they need. Since we have just noted that the side effects are almost inevitable, it follows that most patients are taking unnecessarily toxic doses and are having unnecessarily severe cases of Cushing's disease. This sort of administration gives these useful drugs an unjustifiedly bad reputation.

Everyone in practice, I dare say, has seen some tragic results of cortisone overadministration, and because there is generally a healthy respect for these substances, I should like to cite two cases of my own which illustrate a surprising lack of unfortunate side effects. One patient is a pianist who developed rheumatoid arthritis of the fingers and who continued to take corticoids in order to continue playing her instrument, despite having been advised to stop. When I saw her, she had taken corticoids continuously for five years, but I must confess that I was unable to find any stigmata whatever of Cushing's disease. I, too, told her that the risk was not worth taking, but she didn't seem impressed, and I believe she probably is still taking the drug. The second patient bled from a duodenal ulcer and required five or six transfusions. Two months later, he developed the nephrotic syndrome and underwent a dramatic remission on corticoid therary. He has been taking corticoids continuously for the past two years, except for two occasions when he stopped to see whether a relapse would occur. He started taking them again when it did. This man has had no trouble whatever from his ulcer, and also has none of the stigmata of Cushing's disease, although he did have a moon face at the beginning when the dose was too high. His dose has gradually been whittled down to 2.5 mg. of prednisolone twice daily, and he seems to need that much. I cite these cases to illustrate that the dose can often be drastically reduced over a period of time, and that long-term therapy can be carried out with relative safety if the principle is obeyed.

HOW TO LET GO OF THE TIGER'S TAIL

One hears a great deal about "tapering off" the dose of steroids, but I question the practicality of such a project. In the first place, it seems abun-

dantly clear that no patient should receive a bit more than he needs to control his worst symptoms, and that the management of these patients should be a constant process of nibbling away at the dose to keep them at the lowest possible levels at all times. If this principle is adhered to, there will be only two times for them to stop taking the drug—when the disease is in remission, and when the drug must be abandoned even though the disease is active. In the first situation, the dose will have been reduced to nothing by proper explorative management; that is to say, in the process of feeling for the minimum effective level, we shall have found that the drug is not needed at all. In the second situation, I can see no point in having the patient taper off, for we should have decided that he must abandon the drug regardless of exacerbations.

When the administration has been maintained for a month or more, it may be wise to drop to one physiologic tablet per day so that symptoms of Addison's disease will not appear as a consequence of the atrophy of the patient's adrenal cortices. There may be some point in giving 15 mg. of repository ACTH intramuscularly for two days before stopping entirely, and for two days afterward.

This is an appropriate place for me to say that I see no particular point in giving ACTH at intervals during corticoid administration to prevent adrenal atrophy. The symptoms are usually mild, and the atrophic phase represents no particular problem in the majority of patients. Difficulty usually comes when the patient breaks a leg or develops appendicitis during the course of corticoid therapy, and goes into shock in the operating room because his cortisone has been forgotten in the flurry of the emergency. The patient's ability to adapt to stresses and strains doesn't seem much impaired during corticoid therapy, as long as the treatment isn't inadvertently discontinued.

USEFUL AREAS FOR CORTICOID THERAPY

Space doesn't permit a complete listing of all of the conditions that are occasionally benefited by corticoid therapy. Historically, the collagen diseases—rheumatoid arthritis, lupus erythematosus and rheumatic fever—were first successfully treated by this means at the Mayo Clinic by Hench and Kendall. The present view seems to be that corticoids should be withheld from all but the severest cases of rheumatoid, except that intra-articular injections of hydrocortisone can be administered with relative safety. Cortisone isn't effective here. The evidence isn't entirely clear whether cortisone prevents valvular damage in acute rheumatic fever, but it probably doesn't, so that the use of corticoids is ordinarily limited to the treatment of severe myocarditis. In lupus, the drugs undoubtedly are justified and can add months of comfort and life for victims of an otherwise rapidly fatal disease.

The dermatologist finds that a great many skin conditions of various sorts will respond to topical hydrocortisone ointments, although an occasional case of exfoliative dermatitis is severe enough to justify a short course of oral therapy. It was said at one time that if a patient lived six months, he didn't have pemphigus, but now a number of such patients have lived several years thanks to corticoid therapy, and any side effects are probably justified.

The allergist has nasal sprays of hydrocortisone for hay fever, and he is probably most severely tempted by asthmatics and other allergy sufferers whose symptoms are greatly helped by corticoid products. Yet the benefits rarely justify the dangers.

The gastroenterologist would agree that these substances have a real place in the treatment of sprue, ileitis and ulcerative colitis.

In pulmonary diseases, Boeck's sarcoid and most granulomas respond well, but seldom justify the risks. I should think a trial of corticoids justified in almost every patient with chronic pulmonary insufficiency. Chest specialists usually employ anti-tuberculosis therapy before beginning corticoid treatment because of the danger that tuberculosis may have been confused with something else. It has even been proposed that everyone with a positive tuberculin test should receive anti-tuberculosis therapy before receiving corticoids for any purpose. That point of view, however, is not yet widely held.

HEMATOLOGIC USES

From experimental evidence, we can generalize that the corticoids stimulate granulocytic proliferation of both platelets and polymorphs, and simultaneously cause dissolution of lymphocytes and lymphatic tissues. They are thus often useful in the treatment of lymphatic leukemia, lymphosarcoma and thymic tumors, and may occasionally cause remissions in myasthenia gravis. Conversely, agranulocytosis, aplastic anemia and thrombocytopenic purpura are often helped. The hematologist thus is a most enthusiastic user of these drugs.

THE TREATMENT OF NEPHROSIS

The effects of corticoid administration are ordinarily very prompt, and improvement is usually evident within hours after administration. One disorder which responds sluggishly, however, is the nephrotic syndrome, and as far as I know it is the only one.

It is sometimes said that nephrosis requires unusually large dosages, as a result of the physician's having given five or six physiologic doses daily for a week without achieving any apparent effect. If this dose is raised to 10 physiologic doses daily without effect for another week, and if a dramatic diuresis occurs only after it has been raised to 15 physiologic doses daily, it seems fair to conclude that the large dose was required. On the contrary, what probably was required was three weeks of

therapy at *any* dose. No doubt there are changes in vessel tone and serum proteins which begin at the onset of therapy but don't reach a critical level for a number of days. This point should be appreciated in advance of the development of anasarca, and therapy should not be withheld simply because of the lack of edema. When proteinuria is profuse, it is only a matter of time before the serum proteins fall below a critical level and produce edema. It is much better to administer salt-retaining hormones before the patient becomes waterlogged for other reasons. This consideration usually outweighs the hope that the patient will be lucky enough to get better by himself without developing edema.

Because of the fairly long lag before a diuresis takes place, it was only recently that the beneficial effects of steroids in the nephrotic syndrome were appreciated. The results are not universally favorable, particularly in adults, but they are good enough to justify a prolonged trial in every case of this otherwise discouraging disease.

SUMMARY

We began the corticoid era by thinking that the adrenal steroids had very little use; we soon entered a phase when it was thought justified to give them for any condition; our future views can scarcely be predicted. But at the moment it is probably fair to say that corticoids are used too much for painful conditions like arthritis or for nuisances like hay fever, but aren't used enough in serious situations like miliary tuberculosis, hepatic coma, nephrosis, sprue and ulcerative colitis. To use too little, futhermore, is just as great an abuse as to use too much.

We often think of drugs as Alice in Wonderland thought of words: "When I use a word," Humpty-Dumpty had told her, "It means exactly what I want it to mean, neither more nor less." "But," Alice replied, "the question is whether you can do that to a word." "No," said Humpty-Dumpty, "the question is who is to be master, that's all.

Fifth Annual IAGP—S.U.I.
REFRESHER COURSE FOR THE GENERAL PRACTITIONER
Iowa City

TUESDAY, FEBRUARY 16
Surgery

9:00 a.m. "Care and Repair of Soft Tissue Wounds"—R. T. Tidrick, M.D.
9:30 "Recent Advances in Management of Thyroid Diseases"—C. G. Thomas, M.D., University of North Carolina
10:00 "Office Anesthesia"—J. Moyers, M.D.
10:45 "Hand Injuries"—A. E. Flatt, M.D.
11:15 DIAGNOSIS OF THE ACUTE ABDOMEN: E. S. Brintnall, M.D., G. H. M. Thornton, M.D., H. W. Fischer, M.D., and Dr. Thomas
1:30 p.m. SMALL GROUP CONFERENCES:
"Office Otolaryngology"—J. B. Gregg, M.D.
"Management of Eye Injuries"—F. C. Blodi, M.D.
"Uses and Abuses of Intestinal Tubes"—J. A. Buckwalter, M.D.
"Emergency Care of Chest Injuries"—J. L. Ehrenhaft, M.D.
"Burn Patient Rounds"—S. E. Ziffren, M.D.
"Office Treatment of Ano-Rectal Conditions"—J. A. Gius, M.D.
"Ancillary Measures in Advanced Cancer Patients"—R. C. Hickey, M.D.
"What's New in Surgery"—E. E. Mason, M.D.
2:30 "Immediate Care of Patient With Head Injury"—F. M. Skultety, M.D.
2:55 "Acute Urinary Retention"—D. A. Culp, M.D.
3:35 "Surgery in the Elderly Patient"—Dr. Ziffren
4:00 MELENA, DIAGNOSIS AND MANAGEMENT: J. A. Gius, M.D., C. G. Thomas, M.D., J. A. Clifton, M.D., and H. W. Fischer, M.D.

WEDNESDAY, FEBRUARY 17
Pediatrics

9:00 a.m. "Application of Nutritional Principles to Infant Feeding"—S. J. Fomon, M.D.
9:45 "Care of the Premature Infant"—R. B. Kugel, M.D.
10:45 CLINICAL SYMPOSIUM ON RHEUMATIC FEVER: J. C. MacQueen, M.D., and J. A. Noonan, M.D.
1:30 p.m. CLINICAL SYMPOSIUM ON ERYTHROBLASTOSIS: R. E. Carter, M.D., and C. P. Gopelrud, M.D.
3:45 "Phenylketonuria and Galactosemia"—H. Zellweger, M.D.
6:00 SOCIAL HOUR AND BANQUET: Mayflower Inn

THURSDAY, FEBRUARY 18
Obstetrics & Gynecology

9:00 a.m. "Obstetric Anesthesia in Iowa"—Madelene Donnelly, M.D., Des Moines
9:25 "Labor and Delivery in Breech Presentation"—W. F. Mengert, M.D., University of Illinois
10:00 "Premature Rupture of Membranes"—W. C. Keettel, M.D.
10:45 "Relaxin"—Dr. Mengert
11:00 "Dead Fetus Syndrome"—Dr. Keettel
11:15 "Diuretics in Obstetrics and Gynecology"—Dr. Gopelrud
11:30 "Anemia in Pregnancy"—Dr. Manderson
1:30 p.m. SMALL GROUP CONFERENCES:
"Complications of Third Stage of Labor"—Dr. Mengert
"Newer Progestin Compounds"—Dr. Keettel
"Rational Use of Hormones in Gynecology"—J. T. Bradbury, M.D.
"Obstetric Ward Rounds"—W. B. Goddard, M.D.
"The Rh Sensitized Patient"—Dr. Gopelrud
"Postpartum Care"—Dr. Manderson
"Pudendal Block for Delivery"—D. S. Egbert, M.D., Fort Dodge
"Infertility Problems"—C. A. Richard, M.D.
2:30 "Endometriosis"—Dr. Mengert
3:00 "Anuria and Oliguria in Obstetrics and Gynecology"—Dr. Goddard
3:45 RESUSCITATION OF THE NEWBORN: W. K. Hamilton, M.D., and Drs. Goddard and Gopelrud

FRIDAY, FEBRUARY 19
Medicine

9:00 a.m. "Use and Misuse of Anticoagulant Drugs"—W. E. Connor, M.D.
9:30 BLACKOUT SPELLS: A. L. Sahs, M.D., W. M. Kirkendall, M.D., and J. Clancy, M.D.
10:30 "Treatment of Shock With Drugs"—J. W. Eckstein, M.D.
11:00 "Fungus Infections and Newer Drugs"—R. G. Carney, M.D.
11:30 "Clinical Significance of Vascular Lesions in the Skin"—W. B. Bean, M.D.
1:30 p.m. SMALL GROUP SESSIONS:
"Review of Modern Hematologic Methods"—R. F. Sheets, M.D., H. E. Hamilton, M.D.
"Cardiac Clinic"—E. O. Theilen, M.D., L. E. January, M.D., J. L. Ehrenhaft, M.D., and June M. Fisher, M.D.
"Thyroid Problems"—R. E. Hodges, M.D., E. E. Mason, M.D., and R. E. Peterson, M.D.
"Liver Clinic"—R. D. Eckhardt, M.D., and J. A. Clifton, M.D.
"Endocrine Clinic"—D. B. Stone, M.D.
"Respiratory Disease Clinic"—G. N. Bedell, M.D., W. Wilson, M.D., and I. Horowitz, M.D.
"Psychotic Senile Patients"—P. E. Huston, M.D., and W. W. Macy, M.D.
"Dermatology Clinic"—R. G. Carney, M.D.
2:30 "Present Status of Drugs in Treatment of Mental Depression"—M. C. Pepernik, M.D., and A. S. Norris, M.D.
3:30 "Medicolegal Responsibilities of the Physician for Blood Transfusion"—E. L. DeGowin, M.D.
4:00 "Syndrome of Carotid Artery Narrowing and Occlusion"—M. W. Van Allen, M.D.
4:30 "Management of Bronchial Asthma"—P. M. Seebohm, M.D.

State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 68-YEAR-OLD divorced woman who lived alone on an old-age pension was first seen at the S.U.I. Hospitals 17 months before her second and final admission because of asthma all her life and pneumonia for three weeks. The pneumonia was characterized by wheezing, dyspnea, left chest pain, cough and fever. Physical examination revealed the blood pressure to be 150/80 mm. Hg., the pulse rate 100 per minute and the respirations 20. The chest was hyperresonant, and many rales were heard in both bases and in the region of the right middle lobe. There were no wheezes. The left border of cardiac dullness was halfway between the midclavicular line and the anterior axillary line. There was regular rhythm, 2+ generalized precordial overactivity, and a Grade II soft, poorly localized systolic murmur. The remainder of the examination was normal.

The white blood cell count was 11,200/cu. mm.; the hemoglobin was 11.1 Gm./100 ml.; and the sedimentation rate was 116 mm./hr. A chest x-ray showed fibrotic infiltrate throughout the right lung and the lower lobe of the left lung. The heart and great vessels were normal. Bronchograms revealed saccular bronchiectasis involving the middle and both lower lobes. An electrocardiogram showed digitalis effect. A BUN was 13 mg./100 ml. Sputum cultures grew hemolytic Staphylococcus aureus, Hemophilus influenzae, Candida albicans and a few beta hemolytic streptococci. Acid-fast smears and cultures were negative, and three guinea pigs inoculated with sputum concentrates were negative for tuberculosis. The clinical diagnosis was pulmonary fibrosis and bronchiectasis. The patient was treated with tetracycline, 250 mg. q.i.d. for 10 days, saturated solution of potassium iodide, 10 drops in a half-glass of water t.i.d., postural drainage b.i.d., and digitoxin, 0.1 mg. daily. On this therapy the patient improved, and after 25 days in the hospital, she was discharged.

The second admission was 16 months later. She had been well until 24 hours before admission, when she had suddenly developed vomiting and abdominal pain. The vomiting became progressively more severe. The patient had a soft bowel movement about six hours after the onset of pain. Twelve hours after the onset of pain, she had been seen by her family doctor. He had found abdominal distention, pain and tenderness in the right lower quadrant of the abdomen. She vomited foul-smelling dark brown material. She was given 1/6 grain of morphine sulfate and transported 70 miles to the S.U.I. Hospitals. On arrival here, she was cold, clammy and cyanotic, with a blood pressure of 50/0 mm. Hg. She was treated immediately with Levophed by intravenous drip and oxygen. Also streptomycin, tetracycline and Solu-Cortef were given. A later physical examination revealed an acutely ill, dehydrated and sweating woman with a temperature of 102°F., blood pressure 104/20 mm. Hg. and pulse 142. There was an increase in the anteroposterior diameter of the chest, hyperresonance on percussion, and no rales. The heart was normal. The abdomen was moderately distended and generally tender, and bowel sounds were absent.

A catheter was put into the urinary bladder, and a small amount of urine was obtained. It was normal on examination. The hemoglobin was 14.0 Gm./100 ml., and the white blood cell count was 120,000/cu. mm., with 91 per cent polymorphonuclear leukocytes. A tube was passed into the stomach, and 220 ml. of foul-smelling brown liquid was aspirated.

The patient died 36 hours after admission. Her blood pressure was maintained at around 100 mm. Hg., systolic, up to 15 minutes before death by continuous intravenous Levophed. She passed no urine after admission. She was too ill for an abdominal operation. Most of the time she was oriented and free of pain. The following laboratory findings were obtained about 18 hours after admission: BUN—54 mg./100 ml.; serum amylase —322 units; sodium—114 mEq./L.; potassium—4.8 mEq./L.; and chloride 92 mEq./L. An electrocardiogram showed digitalis effect.

SUMMARY OF CLINICAL DISCUSSION

Dr. Sidney E. Ziffren, Surgery: The patient under discussion today was a 68-year-old woman. She had been admitted to the hospital 17 months before her final admission. The high points of that previous illness, according to the protocol, were that she had a history of asthma, that bronchograms disclosed bronchiectasis, that the diagnosis of pulmonary fibrosis with bronchiectasis was made, and that she was treated with wide-spectrum antibiotic, potassium iodide and postural drainage. She must have had some cardiac difficulty, for she was placed on digitoxin. The patient improved and was discharged.

I shall now concentrate on her second and final admission to the hospital. The history does not provide much information. The protocol states that 24 hours before admission she suddenly had developed vomiting and abdominal pain. I don't know which of these symptoms came first. Ordinarily, surgical diseases in the abdomen begin with abdominal pain and vomiting starts later. It is very rarely that vomiting precedes the pain. Thus, I must assume that the physician taking the history wasn't paying too much attention to the

sequence of symptoms. Apparently he was more concerned with the condition of the patient at the time of admission. At any rate, the vomiting became more severe.

Whenever anyone has pain and vomiting, some type of intestinal obstruction must be considered. The protocol states that the patient had a soft bowel movement about six hours after the onset of the pain. It is not uncommon for an individual who has intestinal obstruction to have a bowel movement following the onset. He may evacuate the bowel distal to the site of obstruction. I presume the examiner was thinking of this at the time and noted this point. Twelve hours after the onset of pain, she had been seen by her home physician, who found abdominal distention, and pain and tenderness in the right lower quadrant of the abdomen. When I read that, I immediately began to think that perhaps she had acute appendicitis, since the tenderness was located in the right lower abdomen. Another possibility occurred to me: perhaps this individual had a large-bowel obstruction that had gone unnoticed, and perhaps finally her cecum had perforated. The protocol says that she was vomiting foul-smelling dark brown material. *Foul-smelling* is a term that can cover a broad field. It can describe material that has been present in the stomach for a long period of time. On the other hand, it can describe material that has been regurgitated from the distal intestinal tract—stuff that is frequently called feculent in nature, characteristic of the distal ileum. She was given 1/6 grain of morphine and sent to the hospital. When she arrived here, she was cold, clammy and cyanotic, with a blood pressure of 50/0 mm. Hg. She was treated with Levophed by intravenous drip, oxygen, streptomycin, tetracycline and a soluble form of cortisone. Reading the protocol, I could find no indication that she received any blood transfusions. Was any blood given to her?

Dr. George D. Bedell, Internal Medicine: No.

Dr. Ziffren: If a patient enters the hospital with a history of abdominal pain and severe vomiting, and is in shock, the first form of therapy I would think of administering would be whole blood, for anyone who is experiencing a catastrophic process in his abdomen pours out large quantities of plasma into the bowel lumen and peritoneal cavity, causing a severe hemoconcentration. This type of shock will respond to blood transfusion. The protocol states that a later physical examination (I don't know how much later) revealed an acutely ill, dehydrated and sweating woman with a temperature of 102°F., a blood pressure of 104/20 mm. Hg., and a pulse of 142. In view of the fact that her blood pressure had been 150/80 mm. Hg. when she was at the hospital on her first admission, this appears to have been a pretty respectable blood pressure, but her pulse was quite rapid. We aren't told that it was irregular. She had no rales, and her heart was normal. The abdomen was moderately distended and generally tender, which I assume means it was tender throughout, and bowel sounds were absent. I can assume from this brief description that she had a generalized peritonitis.

Someone placed a catheter into her urinary bladder, and obtained a small amount of urine that was normal on examination.

The hemoglobin was 14 Gm./100 ml., and the white blood cell count was 120,000/cu. mm., with 91 per cent polymorphonuclear leukocytes. A hemoglobin of 14 Gm. at that time, in view of a hemoglobin of 11 Gm. on her first hospital admission, would indicate that she definitely had hemoconcentration. A white count of 120,000, of course, can mean that she had undergone what is sometimes called a leukemoid reaction from an overwhelming infection, but septicemia or leukemia must be considered as a possibility. With 91 per cent polymorphonuclear leukocytes without mention of myeloblasts or abnormal cells of any other kind, I would tend to discount the latter.

Someone passed a tube into the patient's stomach and aspirated 220 cc. of foul-smelling brown liquid.

The patient died 36 hours after admission. Her blood pressure was maintained at around 100 mm. Hg., systolic, up to 15 minutes before death by means of continuous intravenous Levophed.

She passed no urine and was considered too ill for an abdominal operation. I don't know who made that judgment, but I presume it was made on the basis of her not putting out any urine, for the protocol states that most of the time she was oriented. When someone undergoes an abdominal catastrophe and is free of pain, there usually is an overwhelming process within the peritoneal cavity.

The last laboratory findings obtained about 18 hours after admission, or 18 hours before death, included a BUN elevated to 54, a serum amylase of 322, which is slightly abnormal, and a sodium that was quite low, a chloride which was slightly low, and an EKG that showed digitalis effect.

We have, then, a 68-year-old woman with abdominal pain, vomiting and abdominal tenderness. What was the cause? The first condition that I thought of, as I said before, was acute appendicitis, inasmuch as the record says the home physician found tenderness in the right lower quadrant. An x-ray report stated that a flat film of the abdomen in a decubitus projection showed no evidence of free intraperitoneal air and no evidence of bowel obstruction. It is unfortunate that we don't have the films here, for I should like to see them. It isn't that I question the radiologist's interpretation, but sometimes we can see signs that might not have been looked for originally.

To get back to acute appendicitis, the home physician said that the patient had right lower quadrant tenderness, and we must assume that perhaps she might have had acute appendicitis that resulted in a generalized peritonitis which, in turn, produced an ileus and abdominal distention and

perhaps a septicemia. However, from my experience it is rare for a patient to die so rapidly from a generalized peritonitis following a perforating appendicitis.

In view of the fact that the patient was in shock —and admittedly we haven't much to go on—I should have to consider the possibility of acute pancreatitis. There is nothing to suggest that she might have had gallbladder disease, and similarly there is no evidence that she had icterus, but she did have an amylase of 322. People who have overwhelming abdominal catastrophes, whether from the perforation of a peptic ulcer or from the perforation of one in the bowel, may have an elevated amylase. Thus, I can't put much stock in that finding. The fact that the patient lived only a short time also makes me feel that she did not have acute hemorrhagic or necrotic pancreatitis which produced death. It is true that an overwhelming pancreatitis may produce death, but not so rapidly, and usually such a patient presents excruciating pain going through to the back, and no mention has been made of such radiating pain.

Dismissing this possibility, I'm going to consider the next one—small-bowel obstruction. There is nothing in the history about any previous operation, and the protocol contains no mention of scars upon the abdomen. Thus, I can't blame mechanical small-bowel obstruction upon an adhesive band. But there are other situations that can produce obstruction. A volvulus of the small bowel, for instance, can rapidly produce strangulation. A small-bowel tumor can do the same thing. Or a gallstone could have eroded through into the intestine. Sometimes a patient never has any symptoms of cholecystitis, but the gallstone nevertheless erodes through. Characteristically, the patient has a bout of obstruction that is relieved, then has another bout, and finally the stone descends to the ileum where the bowel lumen is at its narrowest, and a full-fledged obstruction develops. In a patient with mechanical small-bowel obstruction who develops a drop in blood pressure, perforation or gangrene usually has occurred. This, too, is a possibility.

The fact that the patient had tenderness in the right lower quadrant, as I said before, made me think that perhaps she had a large-bowel carcinoma. Distention plays a very strong role in that condition, and if such were this patient's difficulty, the carcinoma may finally have reached the point where it perforated her cecum. This can be a very deadly affair. Such a patient dies from generalized peritonitis, with feces running over the peritoneal cavity.

The fact that this woman had had asthma made me suspicious that perhaps, though it wasn't mentioned in the protocol, she may have received cortisone at some time. As you are probably aware, though no one has been able to explain it, some individuals suffer a perforation of the stomach or bowel following the administration of cortisone. It may be a perforation of an ulcer or actually a perforation of a segment of bowel that has never been diseased, notably the cecum. So this too might have been a possibility, though there is nothing in the patient's history to suggest it.

Then I come to another possibility—one which I haven't yet mentioned but which I think is probably the correct diagnosis. It is mesenteric thrombosis. Here is a lady who I assume was a cardiac since she was taking digitalis. Of course I can't completely exclude the possibility that she may have had leukemia in spite of the fact that no mention was made of any abnormal cells, but she did have a white blood cell count of 120,000. In both heart disease and leukemia, mesenteric vascular occlusion can occur, and in fact does occur more often than in other conditions. She did have a generalized peritonitis and was in shock. She did have hemoconcentration which, of course, accompanies mesenteric thrombosis more frequently than it accompanies just a generalized peritonitis from infection.

What puzzles me is why an attempt wasn't made to pursue this diagnosis a little further. One of the diagnostic measures that one can use is to aspirate the peritoneal cavity with a short, beveled No. 18 needle, to see whether there is any serosanguineous fluid such as is frequently present in an individual who has mesenteric thrombosis. Apparently, it was felt that the patient's condition was hopeless shortly after she came into the hospital, and for that reason nothing further in this direction was done.

All of the conditions I have mentioned are possibilities, but to my mind the most likely diagnosis is mesenteric thrombosis.

Dr. Paul M. Seebohm, Internal Medicine: The history indicates that the pain followed the patient's first attack of vomiting. The clinical diagnosis by one examining physician was: "Shock, etiology unknown. Rule out overwhelming peritonitis, acute leukemia and bacteremia." The next examiner suggested that the patient had an acute abdomen and then listed ruptured appendix, pancreatitis, ruptured gallbladder, mesenteric thrombosis, perforated peptic ulcer and leukemia to be ruled out. Dr. Liebendorfer, a resident in internal medicine, saw this patient after admission. His impression was: "Clinical shock secondary to abdominal pain. Rule out mesenteric thrombosis and ruptured appendix."

Dr. Carleton Nordschow, Pathology: The principal autopsy findings were present in the abdomen. There were three of these: massive infarction of the duodenum, jejunum, ileum and most of the colon down to and including part of the rectum; extensive, but patchy, necrosis of the liver; and very mild and patchy acute pancreatitis. A very thorough search of the aorta and the mesenteric vasculature was made in an effort to demonstrate a thrombus, but none was found. A careful search was made of the colon to find a diverticulum or di-

verticuli, and of the appendix to ascertain whether or not there was a purulent abscess in the area that might have produced pyelophlebitis and a consequent fatty necrosis. These were not found.

Additional findings included severe and chronic bronchiectasis, a nodular goiter of moderate size and a very small parasaggital meningioma.

We do not have gross photographs of the intestine. A small amount of sanguineous fluid was present in the gutters of the peritoneal cavity. The intestines were distended and very thick-walled as a result of edema, and were discolored various shades of brown and blue to black. Microscopically, the walls of both small intestine and colon showed extensive transmural coagulation necrosis, with thrombosis of the mural vessels.

The liver was the site of many small abscesses. Microscopically, it showed diffuse fatty metamorphosis, scattered patches of coagulation and many abscesses.

The pancreas showed a diffuse, acute interstitial cellulitis with small areas of fat necrosis. The lungs showed chronic bronchiectasis. Sections from the small meningioma showed it to be a very collagenized psammomatous type.

This case was a bit difficult to interpret. It was felt that this patient probably had acute pancreatitis with precipitated shock, and that this was the reason for the extraordinary distribution of bowel necrosis. The bowel necrosis was, of course, the primary disorder responsible for the patient's death. My interpretation of the hepatic necrosis is that it probably was secondary to necrosis of the bowel. This patient lived a considerable amount of time, and throughout the microscopic sections of the liver there were many gram-negative rods. The liver was not cultured, but blood from the spleen and fluid from the peritoneal cavity cultured Aerobacter aerogenes in a very luxuriant growth.

Many reports in the literature have emphasized that it is not uncommon to find an apparent mesenteric thrombosis without actual thrombosis. In other words, necrosis of the bowel can occur without a definitive thrombus in the mesenteric artery. This apparently occurs in severe cardiac failure and in other states of shock.

Dr. Ziffren: Do you mean that you didn't find any clots in the veins?

Dr. Nordschow: The clots were only in the wall of the bowel, in the very small venules and arterioles present in the bowel wall.

Dr. John A. Gius, Surgery: Were blood cultures taken during life? If not, what was the source of the Aerobacter aerogenes?

Dr. Nordschow: Well, I assume that the source might be the massive infarction of the bowel—simply a portal-venous shed to the liver and then dissemination systemically. This often is the case with Aerobacter aerogenes.

Dr. Gius: Then the important vessels were not blocked?

Dr. Nordschow: No, they were not.

Dr. Seebohm: Dr. Ziffren brought a few slides of infarcted bowel to show you in case we didn't have any to present.

Dr. Ziffren: I have two slides showing mesenteric thrombosis. The first is a photograph taken at operation of a mesenteric thrombosis of the bowel. In this instance it was the seat of marked venous occlusion with tremendous engorgement of the bowel so that it has a bluish-black color. The second is a segment of the bowel which has been opened to show how it is distributed through all the layers.

I must admit that I'm really puzzled by the pathologists' findings in this case. Am I to understand, Dr. Nordschow, that you thought the patient went into shock from pancreatitis, and that this produced the mesenteric thrombosis? It that your interpretation?

Dr. Nordschow: It is evident that there were no other anatomic findings. That, therefore, is my interpretation as to what might have occurred.

Dr. Ziffren: All kinds of people have pancreatitis, and all kinds of people go into shock, but this patient is a rare one. There was nothing in the heart —nothing at all?

Dr. Nordschow: Just very mild generalized ventricular hypertrophy.

Dr. Ziffren: Dr. Warner, have you ever seen a patient with mesenteric thrombosis?

Dr. Emory D. Warner, Pathology: The findings indicate that this patient didn't have mesenteric thrombosis except for thrombi in the small veins of the bowel wall itself. They probably were secondary to the necrosis. This infarction included more than superior mesenteric artery distribution. For this distribution of necrosis there would need to be a thrombosis of the aorta, since no mesenteric artery supplies the area with necrosis.

About 10 days ago, we had a case of extensive patchy infarction of the small bowel and proximal colon. In other words, the infarction was in the distribution of the mesenteric artery. It was a case of extensive cardiac damage from myocardial infarction and very poor circulation. At the time of the patient's death, there was extensive infarction of the bowel with no thrombi at all. The patient did have very conspicuous constriction of the superior mesenteric artery at its origin from the aorta. In other words, there was an extreme atherosclerosis of the aorta—not so much of the mesenteric artery itself, but of the aorta, with very conspicuous narrowing of the outlet of the superior mesenteric artery. This, in the face of failing circulation, could well cause extensive but patchy infarction.

Dr. Ziffren: I believe our patient was described as having a necrosis from the carotid down. Are you assuming that she had clotting *in situ?*

Dr. Nordschow: No, I am not. She certainly lacked blood supply to the bowel, but precisely

why I do not know. I assume that she must have been in shock.

Dr. Frederic W. Stamler, Pathology: Some years ago, I was involved in the case of an elderly woman who had had a fracture of the hip and had been found in shock. The shock was treated, and she came out of it all right, but died several days later when she went back into shock. She was found to have much this same situation regarding her intestinal tract. There was very extensive infarction with no evidence of thrombosis or occlusion of any of the vessels, although there was a fair amount of atherosclerosis of the aorta and other vessels.

This situation has been recognized by others, and cases are reported now and then. I interpret the infarction of the bowel as ischemic necrosis arising as a result of shock, or of severe hypotension due to heart failure or some other disease. The mechanism of selective involvement is not always apparent, but I think the internists will agree with me that an analagous situation is seen regarding cerebral ischemia and brain infarction, which constitute a relatively common complication under similar conditions.

Dr. Elmer L. DeGowin, Internal Medicine: The findings in this case might be attributed to the unorthodox treatment of secondary shock with Levophed. This patient must have had hemorrhagic shock, but Levophed was apparently given to raise the blood pressure by vasoconstriction without expanding the constricted blood volume by transfusions. A bizarre value of 104/20 mm. Hg. was recorded, and it seems that the diastolic component of that blood pressure was dangerously low for a patient with diminished blood volume. Conceivably, the circulation to the gut proved fatally insufficient.

Dr. Seebohm: Dr. Nordschow, were there similar indications in the kidneys that local ischemia was established?

Dr. Nordschow: No, there were not. The only finding histologically was the usual autolysis of the kidneys. Although the kidney must have been in want of blood, that lack was not manifest histologically.

The literature contains reports from people who have inserted thermocouples into the ostial mucosa of the colon or small bowel of patients with colostomies or ileostomies, and have found a decrease in temperature with the administration of systemic vasoconstricting agents. The bowel apparently loses some blood supply, or at least it is temporarily reduced.

Dr. Ziffren: There are two facts that I want to discuss. First, I should like to discuss mesenteric thrombosis, for the diagnosis is often missed. We see it in three types: the slow mesenteric thrombosis, the rapid, and a third kind that occurs following operation and is often altogether different. The slow one is the type that is seldom diagnosed. The patient has so many different complaints that one can never put his finger on any one of them. It is discoverable only when the patient gets severe anoxia of the bowel and begins to show readily recognizable abdominal symptoms and signs. Then it is too late to do anything. The rapid type is the one that proceeds fast, with terrific abdominal pain, exquisite abdominal tenderness and then shock. This type is often diagnosed.

The type that we sometimes see following operation is very hazardous. It can occur after almost any type of procedure. A patient does well, and then suddenly he begins to do very poorly. His pulse becomes very rapid and sometimes irregular, he frequently falls into shock, and during all of this he may remain well oriented. One considers a whole gamut of diagnoses, but never thinks of the abdomen as the site of the catastrophe. He thinks of pulmonary embolus and of myocardial infarction. An EKG may be done, and the chest carefully examined. But since the patient ordinarily is not tender in the abdomen and doesn't complain of the abdomen, one doesn't pay much attention to it. The reason is that the catastrophe is so overwhelming that the patient just doesn't react like a normal individual. He has a peculiar, apprehensive appearance. His eyes are bold and staring, and he knows that something terrible has happened to him, but he himself cannot tell the doctor where it is located.

There are a couple of clues that one can watch for. These patients may have a drain within the abdomen, and sometimes the type of fluid draining out may provide a hint, for it becomes blackish or brownish and has an odor. In addition, the patient almost always shows a marked elevation in hematocrit or hemoglobin level. Marked hemoconcentration occurs, and that is an important indication.

But when we have discovered the condition, there isn't very much that we can do for these people. It has been said, of course, that one can remove three-fourths of the bowel and get away with it. For that reason, we feel that if one has made the diagnosis, he should explore the patient to see whether he can save his life.

I want to come back once more to the use of Levophed. Now, I have nothing against Levophed as a drug. Not long ago it saved the life of one of my patients. But we have a great tendency, as Dr. DeGowin has pointed out, to pay too much attention to blood pressure and to forget about the underlying difficulty from which the patient is suffering. I, too, plead with you not to forget blood transfusion, our most valuable therapy in the patient who has undergone an abdominal catastrophe.

Dr. Seebohm: Dr. Nordschow, do you think it possible that this lady had a septicemia at the beginning of her illness?

Dr. Nordschow: I don't know. I am certain that

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marked reversal
in 3 days...
returned
to school...
closure advanced[1]





THROMBOPHLEBITIS
back on his feet
in a week after
recurrent episode[1]





REFRACTORY CELLULITIS
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resumed after 4 days
of VARIDASE[1]

the only evidence of septic infection was in the pancreas and liver, and nowhere else.

Dr. Ian Maclean Smith, Internal Medicine: Was the autopsy heart blood culture negative?

Dr. Nordschow: Oh, no. We found Aerobacter aerogenes.

Dr. Jack M. Layton, Pathology: At what time of day did she have the onset of pain?

Dr. Seebohm: It was at about four o'clock in the afternoon, after she had eaten a banana.

Dr. Edward E. Mason, Surgery: I understand that the only abscesses were in the liver, which would suggest that the primary infection was somewhere in the gastrointestinal tract. I suppose it was for that reason that Dr. Nordschow made a point of the fact that he looked for diverticuli. I wonder whether his failing to find any would necessarily rule them out. It could be that the patient had a diverticulitis that infected her liver and caused shock and liver abscesses. The rest of the chain of events covered up some of the others.

Dr. Nordschow: I didn't personally see the bowel, and I was surprised to learn that there were no diverticuli. That is all that I can tell you about it. Your suggestion is certainly reasonable.

ANATOMICAL DIAGNOSES

1. Infarction, extensive, in duodenum, jejunum, ileum and colon, of patchy distribution
2. Necrosis of liver, extensive fatty metamorphosis of liver, pronounced
3. Pancreatitis, interstitial, moderate diffuse
4. Bronchiectasis with fibrosis of lungs, diffuse, mild congestion of lungs, passive, acute
5. Edema of brain, moderate
6. Nodular goiter
7. Meningioma, small, parietal zone, right
8. Congestion of viscera, severe.

Coming Meetings

In State

Jan. 20	**Obstetrics and Gynecology (Postgraduate Conference).** SUI College of Medicine, Iowa City
Feb. 16-19	**Refresher Course for the General Physician.** SUI College of Medicine, Iowa City
Feb. 23-25	**Sixty-Fourth Annual Meeting, Sioux Valley Medical Association.** Sheraton-Martin Hotel, Sioux City

Out of State

Jan. 8	**American Laryngological, Rhinological and Otological Southeastern Sectional Conference.** Philadelphia
Jan. 9	**Northwest Society for Clinical Research.** Seattle
Jan. 10-16	**Sixth Annual General Practice Review.** University of Colorado Medical Center, Denver
Jan. 11-13	**American Academy of Allergy.** Hollywood Beach Hotel, Hollywood-by-the-Sea, Florida
Jan. 11-13	**Ophthalmology for Specialists.** Center for Continuation Study, University of Minnesota
Jan. 11-15	**Fifth Postgraduate Course, Current Concepts of the Rheumatic Diseases—Their Recognition and Management (American College of Physicians).** Lecture Hall, Cornell University Medical College, New York City
Jan. 13	**Los Angeles County Heart Association Fourth Annual Midwinter Symposium.** Statler-Hilton Hotel, Los Angeles
Jan. 13	**Symposium on Problems of Graduate and Postgraduate Education (Connecticut Hospital Association, Connecticut State Medical Society and Yale University School of Medicine).** Yale-New Haven Medical Center, New Haven
Jan. 15-17	**Advances in the Diagnosis and Treatment in Gastroenterology.** University of Southern California, Los Angeles
Jan. 16-18	**Man and His Environment: The Air He Breathes (The University of California School of Medicine and U.C. Extension).** San Francisco
Jan. 17-22	**Mid-Winter Clinical Convention for Ophthalmologists and Otolaryngologists.** Ambassador Hotel, Los Angeles
Jan. 17-30	**Second Bahama Medical Serendipity Conference.** British Colonial Hotel, Nassau, Bahamas
Jan. 18-21	**The Heart: Rheumatic and Congenital Heart Disease.** University of Kansas School of Medicine, Kansas City
Jan. 18-22	**Neuro-Ophthalmology.** New York University, New York City
Jan. 18-22	**Forensic Pathology.** Armed Forces Institute of Pathology, Washington, D. C.
Jan. 20-22	**Eighth Postgraduate Course, Diabetes and Basic Metabolic Problems (The Committee on Professional Education of the American Diabetes Association).** Ambassador Hotel, Los Angeles
Jan. 20-30	**Big Mountain Medical Meeting.** Big Mountain Ski Resort, Whitefish, Montana
Jan. 21-23	**American College of Surgeons, Sectional Meeting.** Brown Hotel, Louisville
Jan. 21-23	**Surgery for Surgeons.** Center for Continuation Study, University of Minnesota, Minneapolis
Jan. 22	**Seattle Academy of Surgery.** Seattle
Jan. 23	**Orange County Heart Association Annual Symposium on Heart Disease.** Gourmet Restaurant, Disneyland Hotel, Anaheim
Jan. 23-28	**American Academy of Orthopaedic Surgeons.** The Palmer House, Chicago

Jan. 25-27	**Medical Technology, Annual Postgraduate Course.** University of Kansas School of Medicine, Kansas City
Jan. 25-29	**Sixth Postgraduate Course, Internal Medicine (American College of Physicians).** Main Auditorium, Clinic Building, Henry Ford Hospital, Detroit
Jan. 27-29	**Western Association of Physicians.** Carmel
Jan. 29	**Fresno County Heart Association Central California Physicians' Eighth Annual Symposium.** Elk's Club, Kings Canyon Road, Fresno
Jan. 28-30	**Rocky Mountain Traumatic Surgery Society.** Aspen, Colorado
Jan. 28-30	**Western Society for Clinical Research.** Carmel-by-the-Sea, California
Jan. 31-Feb. 7	**Pan-American Congress of Ophthalmology.** Caracas, Venezuela
Feb. 1-3	**The 1960 Blue Shield Professional Relations Conference.** Drake Hotel, Chicago
Feb. 1-5	**Clinical Congress of Abdominal Surgeons.** Deauville Hotel, Miami Beach
Feb. 3-6	**American College of Radiology.** Roosevelt Hotel, New Orleans
Feb. 4	**Bedside Cardiology.** University of Southern California, Los Angeles
Feb. 4-5	**Regional Postgraduate Institute (West Coast Counties in cooperation with University of California).** Del Monte Lodge, Pebble Beach
Feb. 4-5	**Respiro Cardiac Resuscitation (The American College of Cardiology).** New York City
Feb. 6-7	**American College of Physicians Annual Southern California Regional Meeting.** Hotel del Coronado, Coronado
Feb. 6-7	**Los Angeles Obstetrical and Gynecological Society Forum.** Ambassador Hotel, Los Angeles
Feb. 7-9	**Congress on Medical Education and Licensure.** Palmer House, Chicago
Feb. 8-10	**Cardiovascular Diseases for General Physicians and Specialists.** Center for Continuation Study, University of Minnesota
Feb. 8-10	**Radiology & Radioactive Isotopes.** University of Kansas School of Medicine, Kansas City
Feb. 8-12	**Fifteenth Annual Mid-Winter Clinical Assembly, Obstetrical and Gynecological Assembly of Southern California.** Ambassador Hotel, Los Angeles
Feb. 8-12	**Recent Advances in Metabolic Diseases, American College of Physicians.** Blumenthal Auditorium, Mount Sinai Hospital, New York City
Feb. 9-12	**Mid-South Postgraduate Medical Assembly.** Peabody Hotel, Memphis
Feb. 10-12	**American Academy of Occupational Medicine.** Williamsburg Inn, Williamsburg, Va.
Feb. 11	**The Ophthalmoscope: Its Use in Medicine.** University of Kansas School of Medicine, Kansas City
Feb. 11-13	**Society of University Surgeons.** Minneapolis
Feb. 12-13	**The Back: A Law-Medicine Problem Reappraised (The Law-Medicine Center of Western Reserve University).** Hatch Auditorium, Western Reserve University, Cleveland
Feb. 13-14	**Arizona Academy of General Practitioners and Arizona Psychiatric Association Psychiatric Seminar.** Phoenix
Feb. 15-19	**Pediatric Neurology for Specialists.** Center for Continuation Study, University of Minnesota
Feb. 16-18	**National Association of Methodist Hospitals and Homes.** Deshler Hilton Hotel, Columbus
Feb. 18-20	**Alaska State Medical Association.** Anchorage
Feb. 18-20	**Central Surgical Association.** Drake Hotel, Chicago
Feb. 21-23	**Infectious Diseases (California Medical Association).** Ambassador Hotel, Los Angeles
Feb. 21-23	**Minor Surgery (California Medical Association).** White Memorial Hospital, Los Angeles
Feb. 21-23	**Clinical Endocrinology (California Medical Association).** Los Angeles County Hospital and Ambassador Hotel, Los Angeles
Feb. 21-24	**Annual Meeting Pacific Coast Surgical Association.** Palm Springs
Feb. 21-24	**Annual Meeting California Medical Association.** Ambassador Hotel, Los Angeles
Feb. 22-26	**Hematology.** University of Kansas School of Medicine, Kansas City
Feb. 25-27	**American Orthopsychiatric Association, Inc.** Sherman Hotel, Chicago
Feb. 25-27	**Symposium on Fundamental Cancer Research.** University of Texas, Houston
Feb. 25-March 5	**Special Clinical Postgraduate Course in Anesthesiology, Gastroenterology, Dermatology, Cardiology, Pediatrics, and General Surgery (UCLA and University of Mexico).** UCLA Medical Center, Los Angeles
Feb. 26-27	**Virginia Pediatric Society.** White Sulphur Springs, West Virginia
Feb. 28-March 4	**Sixteenth Congress and Graduate Instructional Course in Allergy (The American College of Allergists).** Americana Hotel, Bal Harbour, Miami Beach
Feb. 28-March 3	**Annual Alumni Postgraduate Convention, Alumni Assn. of the School of Medicine (College of Medical Evangelists).** White Memorial Hospital and the Ambassador Hotel, Los Angeles
Feb. 29-March 2	**Pediatrics for General Physicians.** Center for Continuation Study, University of Minnesota
Feb. 29-March 3	**American College of Surgeons, Four-Day Sectional Meeting for Surgeons and Nurses.** Statler-Hilton and Sheraton-Plaza, Boston

Letter to the Editor

Sir:

I have read pages urging that fluorides be added to city water supplies to prevent decay of the teeth of children. Would it not be far more logical to dump a quantity of "flu" vaccine into the Iowa and the Des Moines rivers to control the present wave of Asian flu?

I would be willing to donate my supply of vaccine for that purpose, if it should be decided to do that.

Yours fraternally,

J. H. CHITTUM, M.D.

Wapello, Iowa



HAPPY NEW YEAR!

Once again, the editors of the JOURNAL take this opportunity to wish you, the members of the Iowa State Medical Society, a Happy New Year!

The coming 12 months promise no marked relief from the tensions, both international and domestic, that have characterized most of the years of our lives, but we can take comfort from the certainty that physicians are continuing to provide ever better medical care for the people of America and of the rest of the world, and from the probabilities that relations between United States and Russia will get no worse in the immediate future, that the current labor-management difficulties in industry will have the effect of prolonging rather than ending prosperity, and that things as a whole, though perhaps still headed toward ruin, are not moving in that direction with their former breakneck speed.

In 1960, doctors in Iowa as well as elsewhere throughout the country will need to take time out from their practices for political activities. So that you Iowa physicians can be most effective in helping preserve the present socio-economic system, a special nonpartisan organization is being formed, necessarily separate from the Iowa State Medical Society. We hope that all of you will join it and participate wholeheartedly in its work.

AMA STUDY OF MEDICAL EDUCATION

In its annual comprehensive report on all aspects of medical education, the AMA Council on Medical Education and Hospitals predicted a need for 10,000 graduates a year from medical schools in the United States by 1975. The 1958-1959 graduating classes numbered 6,860, one less than graduated in 1957-1958. "The fundamental issue," the report said, ". . . is that all estimates indicate a need for expansion of educational facilities in medicine in a brief period which far exceeds any . . . that has occurred in a similar period during modern times."

The Council estimated that even though existing schools are expanded (and it warned against any expansion of present schools that might endanger their present high standards of education and research), it appears likely that at least 10 new schools with average graduating classes of 100 each will be required to meet the health-care needs of the expanding population.

At the same time that the need for doctors is increasing, the numbers of well qualified applicants for entry into medical schools is declining rather precipitously. In 1958-1959, the Council found, there were only 15,170 applicants, or fewer than two for each place in a first-year class. At present, two-thirds of medical students had "B" averages as undergraduates; one-sixth had "A" averages; and one-sixth had "C" averages.

Regarding the medical students of the future, the Council said, "Medicine is finding increased competition for the pool of top-ranking students because it no longer occupies the unique position as a profession which it held in the past and shared largely only with law and the ministry. The professions open to the college graduate are now much broader, and they provide prestige, intellectual satisfaction and financial rewards comparable to those offered by medicine."

The Council declared, "Medicine must make active efforts to inform young people of the breadth of interests and challenges it offers, or surely it will suffer a serious loss of the best young talent."

GOUTY ARTHRITIS

The public persists in its old idea that an attack of gout can be traced to high living, yet the disease is a relatively common one in our general hospital and office practices. This is as true in Iowa as in New York City or San Francisco. Even a specialist treating another system of the body may overlook an acute gouty arthritis and fail to appreciate the significance of his patient's acute articular distress.

Up-to-date management can enable an afflicted individual to continue on his job and to go on leading an essentially normal life. If prophylactic measures are respected, the disease can become a minor, rather than a major, medical problem.

It must be remembered that gout may follow an operative procedure, heart failure, renal calculus, acute pharyngitis or an anxiety reaction. By far the greater incidence occurs among men. Talbot says that not more than five per cent of the patients are females, but they are harder to treat than the males.* Age has little to do with the development of acute articular distress.

The main cause for the increased concentration of uric acid in blood and body fluid appears to be an increased formation of uric acid by the body. It is not necessary to await cystic changes in the bones, as demonstrated in x-ray examinations, or for the development of subcutaneous tophi before suspecting gout. Any onset of acute joint pain in a previously healthy male should be accepted as presumptive evidence. This is particularly true when observed in a peripheral joint, although the disease may attack even the spine.

The diagnosis is easily confirmed by the re-

* Talbot, John H.: GOUT. New York, Grune & Stratton, 1957.

sponse of the patient to treatment. The majority of individuals with acute articular gout will obtain relief after a full course of colchicine, which provides diagnostic as well as therapeutic aid. This drug has long been known to be a specific agent, and has no effect upon other types of acute articular distress. It should be administered as early as possible, 1.0 mg. being given every two hours until the onset of gastrointestinal distress occurs. From five to eight doses are required.

Following the acute attack, colchicine may be combined with Benemid in the prevention of a recurrence of acute attacks. The drugs complement one another, and neither is as effective as is the combination. It may be necessary for the gouty patient to take one tablet of colchicine every day of the year. Tolerance to the drug does not develop, and there is no loss of effectiveness if an acute attack takes place. Benemid is an excellent agent for eliminating uric acid from the body. Frequently, one or two tablets per day serve as an excellent maintenance dosage.

These patients must be informed that mild attacks may recur from time to time, and they must be instructed to increase the dosage of the drugs to meet such situations. It is not believed that these agents cure gout, but they will provide a more nearly satisfactory form of treatment than is available for any other common type of joint disease. Newer drugs have appeared, such as Flexin and Anturan, but further study is required to evaluate them.

It becomes apparent that gout is not difficult to diagnose, once it has been suspected. The treatment is not complicated, and will afford satisfaction both to the patient and the physician if properly administered.

BLUE SHIELD COVERAGE FOR THE ELDERLY IS NOW NATIONWIDE

The nationwide Blue Shield Plans and their sponsoring medical societies have registered outstanding progress in implementing the American Medical Association resolution—passed one year ago—calling for the development of medical care coverage for the aged by voluntary means, John W. Castellucci, executive vice-president of the National Association of Blue Shield Plans said in Chicago during December.

"We have just completed a special survey in order to determine the progress made by Blue Shield Plans since the passage of the AMA resolution last December 4 and the results are most encouraging," Castellucci reported.

"Only eight of the 67 Blue Shield Plans located in the United States, with only two per cent of total Blue Shield membership, have no programs for senior citizens in the works at the present time," he noted.

Castellucci said that the remaining 59 Plans either have special aged programs already being offered in their areas, or have programs in various stages of development.

Specifically, the study conducted by the national Blue Shield association showed that 32 of the Plans, representing more than 50 per cent of total enrollment, have made available nongroup programs for persons over the age of 65. Three Plans, with about 15 per cent of total Blue Shield membership, have programs already approved and ready to be offered as soon as the mechanics of administration are completed. Also, 23 additional Plans, covering 30 per cent of total enrollment, have senior citizen programs in various stages of development and these Plans report that they expect their programs to be in force early in 1960.

Thus, about 98 per cent of the total United States Blue Shield enrollment is in areas where special aged programs are already being offered or are in stages of development, all within a one year period following passage of the AMA resolution.

Castellucci indicated that in the development of programs for senior citizens, the Plans have followed three general lines of approach: (1) developed new programs designed specifically for persons over 65; (2) effected modifications in existing programs to accommodate enrollees over 65; (3) eliminated age limits on existing nongroup programs offered to the general public who are not eligible to join through their place of employment.

Prior to the passage of the AMA resolution, the national Blue Shield organization noted, only a limited number of Plans had special programs for the aged, although all Plans traditionally imposed no age limit on group enrollment and permitted continuation of Blue Shield coverage to all members who had acquired it prior to reaching 65.

"While it is realized that the many and varied problems confronting our senior citizens cannot readily be solved in a short period of time, it is heartwarming to note the significant progress made by Blue Shield Plans throughout the country in the past year in developing programs to meet the special medical needs of persons over 65. In offering these programs Blue Shield, of course, is fully cognizant of the splendid cooperation offered by sponsoring medical societies without whose efforts such significant progress could not have possibly been recorded in 12 short months," Castellucci concluded.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines

OLD FOLKS AT HOME

We are fast reaching the point where we'll have a vested interest in all these plans to help the old folks. But it strikes us that the ideas of some of these youthful experts on the subject have the problem turned upside down.

Take this latest proposal to give us special tax deductions in our doddering days. Already the 65-and-up get a double exemption on their federal income tax forms plus special treatment on bills with the doctor and druggist. Now some kindly young sociologists have asked the House Ways and Means Committee to make other special tax allowances for those who have endured long enough to be called "senior citizens."

Well, we thank them for their interest, but we suggest they go home and take a look at their own income tax returns. They might figure out what the federal government, and the state governments, not to mention the Social Security Board, take out of the nominal salary of even a middle income, middle-aged citizen. And then they might reflect what a part of this sum, accumulated over 15 or 20 years, might do to ease the pains of decrepitude if government would just let a man keep it and save it.

Juniors, we are told, have difficulty visualizing themselves as seniors. But we would like to point out to them that there is one small catch in their plan to help us with tax deductions. A tax deduction is worthless unless you have income to deduct the tax from.

Another paternal thought: Even if these young folks could help us with bigger tax deductions, the total tax bill would still have to be paid by somebody. If the total tax bill stays where it is, that simply means higher taxes for these earnest helpers. And less money left for their own old age.

It's nice of the Ways and Means Committee to think of us. But it would be more helpful if the members would think of ways to reduce the total tax bill on young folks so they would have the means to dignity when they too are old folks.

—Editorial, THE WALL STREET JOURNAL, November 25, 1959.

POSTGRADUATE COURSE ON CHEST DISEASES

The 13th Annual Postgraduate Course on Diseases of the Chest, sponsored by the American College of Chest Physicians, will be held at the Sheraton Hotel, Philadelphia, March 14-18, 1960. The fee will be $75 for members of the College, and $100 for other physicians.

Copies of the program and answers to questions about it can be secured from the College's headquarters, 112 East Chestnut Street, Chicago 11.

RHEUMATIC AND CONGENITAL HEART DISEASE

The University of Kansas Medical Center will present two days of lectures on congenital and two days of lectures on rheumatic heart disease in Kansas City, Kansas, on January 18-21. Diagnosis and therapy will be discussed by outstanding surgeons and internists, and there will also be discussions of basic physiology and pathology. Members of AAGP can earn 28 hours of Category I credit by attending.

In addition to 16 teachers from the Kansas University Medical Center, the faculty will include: Eugene Braunwald, M.D., of the National Institutes of Health; Denton A. Cooley, M.D., associate professor of surgery at Baylor; Ernest W. Craige, M.D., associate professor of medicine at the University of North Carolina; C. Rollins Hanlon, M.D., professor and head of surgery at St. Louis University; J. Willis Hurst, M.D., professor and head of medicine at Emory University; John W. Kirklin, M.D., associate in surgery at the Mayo Foundation; Gordon S. Myers, M.D., clinical associate in medicine at Harvard; Oglesby Paul, M.D., clinical associate professor of medicine at the University of Illinois; Demetrio Sodi-Pallares, M.D., head of cardiovascular clinics at the University of Mexico; and Edwin O. Wheeler, instructor in medicine at Harvard.

The fee for the course is $75. Interns and residents will be granted complimentary enrollment on the recommendation of their hospital superintendents.

HYPOTHERMIA SEEMS TO REDUCE ANTIBIOTIC RESISTANCE

Drs. H. Reich and H. Kasoff, of Beth Israel Hospital, Newark, have reported experimental studies indicating that hypothermia apparently causes certain antibiotic-resistant organisms to acquire sensitivity to commonly used antibiotics.* They say: "The idea that hypothermia, itself a more common instrument of clinical management, might perhaps combat both the bacterial and clinical aspects [of an infectious process] is an intriguing one." They added that they were encouraged to find that the more significant changes occurred in the group of organisms that have been the most frequent clinical offenders.

The investigators concluded their report with the statement: "Further studies along both experimental and clinical lines are certainly indicated."

* Reich, H., and Kasoff, H.: Effect of hypothermia on resistance of bacteria to antibiotics. J. NEWARK BETH ISRAEL HOSPITAL, **10**:273, (Oct.) 1959

President's Page

At the Clinical Meeting in Dallas early last month, the AMA House of Delegates took a number of important actions.

Because the press in Minneapolis and in Atlantic City a year earlier had mistakenly reported one of its actions as constituting an endorsement of closed-panel practice, the House adopted the following statement: "Lest there be any misinterpretation, we state unequivocally that the American Medical Association firmly subscribes to freedom of choice of physician and free competition among physicians as being prerequisites to optimal medical care. The benefits of any system which provides medical care must be judged on the degree to which it allows of, or abridges, such freedom of choice and such competition."

As regards physician-hospital relations, the AMA House of Delegates reaffirmed the 1951 "Guides," and accepted a recommendation that it acknowledge the need to strengthen relationships with hospitals by action at state and local levels.

The House recommended that state medical societies assist individual veterans in assessing their ability to pay for needed care.

It created a special study committee to study ways of meeting the doctor shortage. One of the responsibilities of the new group will be to plan an AMA scholarship program as a means of attracting capable students to the study of medicine.

John W. Billingsley

President

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

A DOCTOR'S LIFE OF JOHN KEATS, by *Walter A. Wells*, M.D. (New York, The Vantage Press, 1959. $3.95).

MANUAL OF SKIN DISEASES, by *Gordon C. Sauer*, M.D. (Philadelphia, J. B. Lippincott Company, 1959. $9.75).

A GUIDE TO ANTIBIOTIC THERAPY, by *Henry Welch*, Ph.D. (New York, Medical Encyclopedia, Inc., 1959. $3.00).

THE CLONAL SELECTION THEORY OF ACQUIRED IMMUNITY, by *Sir Macfarlane Burnet*. (Nashville, Vanderbiit University Press, 1959. $5.00).

CHRISTOPHER'S MINOR SURGERY, EIGHTH EDITION, by *Alton Ochsner*, M.D., and *Michael E. DeBakey*, M.D. (Philadelphia, W. B. Saunders Company, 1959. $10.50).

THE YEAR BOOK OF GENERAL SURGERY, ed. by *Michael E. DeBakey*, M.D., (Chicago, The Year Book Publishers, Inc., 1959. $8.00).

ANTIBIOTIC THERAPY FOR STAPHYLOCOCCAL DISEASES, by *Henry Welch*, Ph.D., and *Maxwell Finland*, M.D. (New York, Medical Encyclopedia, Inc., 1959. $4.50).

THE LIFE EXTENSION FOUNDATION GUIDE TO BETTER HEALTH, by *Harry J. Johnson*, M.D. (New York, Prentice-Hall, Inc., 1959).

BABIES BY CHOICE OR BY CHANCE, by *Alan F. Guttmacher*, M.D. (New York, Doubleday & Co., Inc., 1959. $3.95).

SOIL, GRASS AND CANCER, by *Andre Voisin*. (New York, Philosophical Library, Inc., 1959. $15.00).

OBSERVATIONS ON "DIRECT ANALYSIS," THE THERAPEUTIC TECHNIQUE OF DR. JOHN N. ROSEN, by *Morris W. Brody*, M.D. (New York, The Vantage Press, 1959. $2.95).

BOOK REVIEWS

LECTURES ON INTERPRETATION OF PAIN IN ORTHOPEDIC PRACTICE, by *Arthur Steindler*, M.D. (Springfield, Illinois, Charles C Thomas, 1959. $18.50).

The author has been an authority without peer in the field covered by this textbook. He was one of the pioneers in the delineration of "trigger zones" as a means of exact diagnosis of many orthopedic lesions. Not only does the author relate the role of pain in almost all known orthopedic conditions, but his philosophy behind his reasoning clearly emphasizes the importance of interpreting the causes of pain. The anatomic basis for pain is clearly presented. Numerous illustrations and case reports enhance individual problems.

Orthopedic surgeons, neurologists and neurosurgeons should consider this volume a most welcome addition to their libraries. All students of medicine will find answers in it to myriad problems that other textbooks don't help them solve. The volume represents a monumental effort upon the part of Dr. Steindler, and fittingly culminates his career as a teacher.—*Everett M. George*, M.D.

1959-1960 YEAR BOOK OF MEDICINE, ed. by *Paul B. Beeson*, M.D., *Carl Muschenheim*, M.D., *William B. Castle*, M.D., *Tinsley R. Harrison*, M.D., *Franz J. Ingelfinger*, M.D., and *Philip K. Bondy*, M.D. (Chicago, The Year Book Publishers, Inc., 1959. $8.00).

This year's YEARBOOK OF MEDICINE, like its predecessors, consists of abstracts of recent articles in the field of internal medicine which the editors regard as highly significant. Each article is introduced in bold-faced type and then abstracted as briefly or lengthily as its quality has been thought to merit. Occasionally, an abstract is followed by an editorial comment.

The lengths that the various components of the Year Book series have attained attest to their popularity. Only important works are abstracted and the condensations are done excellently. The reader may note fewer cute editorial quips than before. These have served to enliven the books and should be continued. It is good for editors to have a sense of humor and perspective!

One can also note the general trend toward emphasis upon chemistry and biochemistry—one which is likely to become more pronounced as the years roll by. Simple descriptions of disease entities and analyses of hundreds of cases are not enough in this day and age. All in all, the successive volumes in this series continue to provide the busy doctor a maximum of information in exchange for a minimum expenditure of his time.—*Daniel A. Glosmet*, M.D.

SYNOPSIS OF OPHTHALMOLOGY, by *William H. Havener*, M.D. (St. Louis, C. V. Mosby Company, 1959. $6.75).

This is a short textbook written for the general practitioner and medical student. Thus, it has little value for the practicing ophthalmologist.

The various subjects are covered in a clear and concise manner, and the book is generously illustrated. Thus, the volume should be a great help to the general practitioner who wants to look up some information on an eye condition. Unfortunately, some of the photographs are of poor quality, but on the whole they are good.

About one-fourth of the book is devoted to the medical and neurological conditions that concern the eye, as is quite proper in a book of this nature. The chapter on refraction is short, apparently because the

author feels that the general practitioner would have no particular interest in the topic. In the chapter on referral of patients, some space has been devoted to the distinctions between *ophthalmologist, optometrist* and *optician*. There has always been some confusion of those terms, even among members of the medical profession, and all efforts to clear up such misunderstandings are welcome.

The chapter on first aid gives a great deal of good, commonsense advice, and emphasizes the importance of early referral of cases that present diagnostic problems.

This book should be valuable for the general practitioner and internist, but would have little value for the ophthalmologist. —*Henry H. Gurau,* M.D.

NIH ASKS PHYSICIANS FOR REFERRALS

HYPERTENSIVE PATIENTS

Drs. Louis Gillespie, Jr., and John A. Oates, of the Section on Experimental Therapeutics of the National Heart Institute, Bethesda, Maryland, request the cooperation of private practitioners in their study of various forms of hypertension. They are particularly interested in patients having moderate to severe hypertension which is either primary or renal in origin. Their objectives are to develop improved therapeutic agents and to investigate the alterations of metabolism of various vasoactive amines such as noradrenalin and serotonin by means of agents that are enzyme inhibitors.

Patients found acceptable for admission should expect to be hospitalized for about one month. An appropriate medical workup will be performed, the patient will be studied during the administration of a new and properly screened compound, and finally he will be put on appropriate antihypertensive medications in current use and discharged to the care of the referring physician. It is preferred that the patient should not have advanced azotemia, marked congestive failure or cerebral vascular insufficiency.

Drs. Gillespie and Oates are also interested in studying pheochromocytoma and emphasis on hypertension of unilateral renal origin. Diagnostic studies at the Heart Institute would include renal arteriography and retrograde ureteral catheterization to determine unilateral function. Corrective surgery, either vascular repair or nephrectomy, would be performed as part of the study.

SOLID TUMORS IN CHILDREN

Drs. Clyde O. Brindley and Emil Frei, III, request the cooperation of private practitioners in their therapeutic study of childhood solid tumors. They are searching for therapeutic agents that will favorably affect such conditions, and they are particularly interested in working with children with Wilms' tumors, neuroblastomas, rhabdomyosarcomas, sarcoma botryoides and the lymphomas. It is hoped that some of the newer agents active in animal tumors will improve on the present results from chemotherapy.

They prefer that patients be referred to them either before or after receiving initial therapy (surgery and/or radiation) but before they reach the advanced bedridden stage. The patients whom they accept will be studied for varying periods of time and thereafter can be followed by either the referring physician or by the Clinical Center. A comprehensive and individualized program will be instituted for each patient and will include appropriate supportive and symptomatic care as well as the above-mentioned specific anti-tumor therapy.

A RE-EVALUATION OF THE COFFEE BREAK

Dr. Jean Spencer Felton, of the Schools of Medicine and Public Health at U.C.L.A., asserts that the physiologic benefits of the "coffee break" have been considerably overestimated, but says that it is completely justifiable upon quite another basis.* It has not been proved, she points out, that a morning and an afternoon cup of coffee increases production, improves morale, minimizes absenteeism, lowers labor turnover, drops accident frequency rates or eliminates fatigue as has been claimed. Instead, she believes the benefit accruing to the employee lies in the opportunity which the recess provides him for individual growth through frequent and relaxed exchanges of ideas with his fellows.

Over cups of coffee, experiences are exchanged, tensions are loosened and plans are made for joint activities. Employees practice their skills in meeting people, ego strengths are firmed, prestige is boosted and new cores of interest are created for non-doers.

"As a focal site for ventilation of restrained expression, voicing of group opinions, and a general forum for the exchange of beefs and gripes, the coffee-break setting serves as a steam-head-reducer in keeping pressures at a desirable level," Dr. Felton continued. "Rumors and grapevine products are brought in and verbalized to try them out for size and significance, and group thinking gives impetus to what eventually may become a change in company policy."

She points out that coffee contains between 100 and 150 mg. of caffeine in one average cup, a quantity at the lower border of a therapeutic dose.

* Felton, J. S.: Coffee break. INDUST. MED. & SURG., 28:433ff., (Oct.) 1959.

STATE DEPARTMENT OF HEALTH

Edward D. Zimmer
COMMISSIONER

POLIOMYELITIS VACCINATION

About 87,000,000 Americans have now had at least one injection of poliomyelitis vaccine, and 68,000,000 have had three or more injections, according to new estimates announced by the U. S. Public Health Service.

The figures were released during a day-long meeting, Friday, December 4, of representatives of health and medical organizations called to Washington to review the 1959 poliomyelitis experience and to map out ways of promoting further vaccinations before next summer. Dr. James F. Speers, health officer of the Des Moines-Polk County Health Departments, represented Iowa at the meeting.

Among persons under 40 years of age, over 34,000,000 or almost 30 per cent have had no vaccine. Among children under five years of age—the group that accounted for 43 per cent of the paralytic cases this year—4,500,000 have had no vaccine.

Data from a survey conducted for the Public Health Service by the Bureau of the Census in September, supplemented with data from the National Foundation, form the basis for the new estimates. They indicate that about 14,600,000 more people have had some vaccine, and 13,200,000 more people have had the recommended dosage of three or more injections since the fall of 1958 when comparable estimates were made.

Plans for a new advertising campaign to be conducted by the Advertising Council and sponsored by the Public Health Service, the AMA and the National Foundation, were also announced at the meeting. The campaign will be launched in the early spring to support local vaccination drives.

An analysis of the 1959 poliomyelitis experience, made by the Communicable Disease Center of the Public Health Service and reported at the meeting, showed that the vaccine had proved to be at least 90 per cent effective this year in protecting persons who had had three or more doses. In the three cities where major epidemics occurred this year—Des Moines, Kansas City, Missouri, and Little Rock—cases were concentrated among unvaccinated persons living in crowded, lower-bracket economic areas. A similar pattern occurred in most of the 14 other cities that reported moderate outbreaks.

After reviewing these and other data, the conference concluded that communities should start immediately to plan intensive campaigns, including surveys to find the neighborhoods where most of the unvaccinated live. They urged that special emphasis be placed on giving vaccinations to infants and pre-school children, only 53 per cent of whom have as yet had the recommended schedule of three or more injections. They also urged that all persons who had their third injection a year or more ago be encouraged to get a fourth injection before next summer.

TUBERCULOSIS DEATHS—IOWA (1922-1958)
By Age Group

Year	*Total*	*0-4*	*5-14*	*15-24*	*25-44*	*45-64*	*65 & Over*	*N.S.*
1958	75	0	0	1	5	36	33	—
1955	110	1	1	3	20	39	46	—
1952	181	2	0	3	48	67	61	—
1949	243	4	1	18	71	73	76	—
1946	309	5	7	18	90	116	73	—
1943	380	5	8	37	115	135	80	—
1940	436	7	8	38	151	173	59	—
1937	521	15	6	66	188	154	92	—
1934	606	14	11	74	217	183	107	—
1931	729	15	14	126	273	191	110	—
1928	850	23	21	140	318	214	133	1
1925	990	39	28	182	369	221	150	1
1922	1,014	35	20	206	410	214	127	2

The problem of tuberculosis in any area can no longer be measured by the number of deaths. Yet tuberculosis deaths, with a reduction of 92.6 per cent in Iowa in the 36-year period from 1922 through 1958, do show the current trend of the disease in the state. Other states in this area show the same total reduction of tuberculosis deaths (during the same time period Illinois' tuberculosis deaths declined 86.4 per cent),* and the same shift of deaths with increasing percentages occurring in the older age groups.

These facts are even more strikingly seen in our Iowa reports if the first six years of the period (1922-1928) are compared with the last six years (1952-1958), as arranged in the accompanying charts.

Tuberculosis, year by year, is becoming a chronic disease with the greater number of cases occurring in the older age group.

Year	Total	0-4	5-14	15-24	25-44	45-64	65 & Over	N.S.
1928	850	23	21	140	318	214	133	1
1925	990	39	28	182	369	221	150	1
1922	1,014	35	20	206	410	214	127	2
	2,854	3.3%	2.4%	18.5%	38%	22.7%	14.3%	1.47%
1958	75	0	0	1	5	36	33	—
1955	110	1	1	3	20	39	46	—
1952	181	2	0	3	48	67	61	—
	366	0.8%	0.2%	1.9%	19.9%	38.7%	38.2%	

* Weekly report Illinois State Department of Health—November 6, 1959.

THE BATTLE AGAINST VENEREAL DISEASES MUST CONTINUE

In its November statistical bulletin, *Progress in Health Services,* the Health Information Foundation pointed out that the rate of new cases of syphilis reported in this country is today less than one-sixth what it was in 1943. New cases of gonorrhea, the other major venereal disease, are being reported at less than half the 1947 rate. But despite these improvements, there are still large "reservoirs" of these diseases. Many persons with syphilis or gonorrhea are unknown to public health authorities, and often the individuals themselves don't know they are infected. The U. S. Public Health Service estimates that 60,000 new cases of syphilis and one million of gonorrhea are still acquired each year—and many of them are not reported.

Both venereal diseases are acquired mainly by young people. The median age among reported cases of primary and secondary syphilis last year was 25.1 years, while for gonorrhea it was 23.8. Venereal disease is also reported more frequently among males than females, among non-whites than whites, and among people in the Southern and Southwestern states than in the rest of the country.

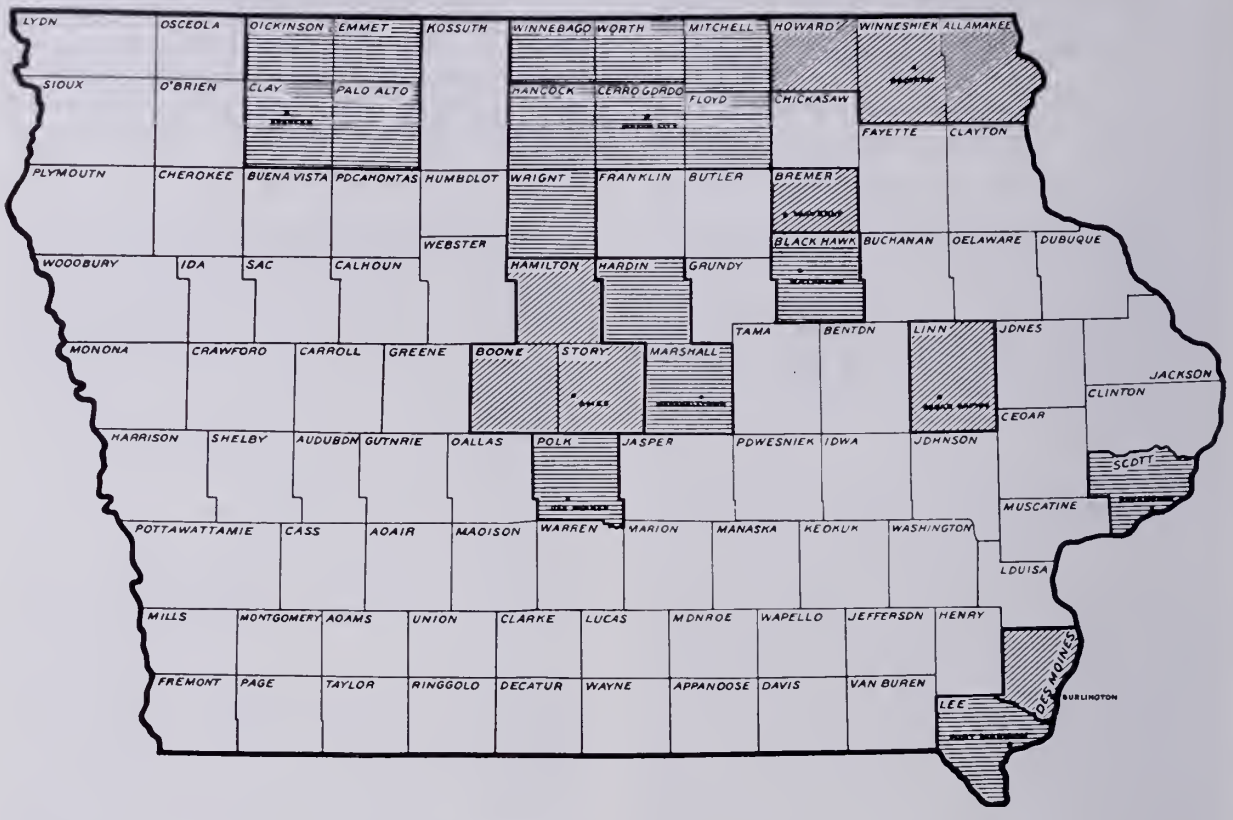
The continued prevalence of venereal disease, the Foundation report continued, is especially incongruous in view of the effective methods of treatment now available. "With other health problems," commented George Bugbee, Foundation President, "new medical knowledge has often meant extensive hospitalization and treatment by the physician at much greater expense. With the venereal diseases, however, modern treatment with antibiotics is rapid, sure and inexpensive. Earlier, treatments of syphilis required large investments of time and money. Gonorrhea was sometimes resistant to earlier treatment; could involve long, expensive care; and occasionally left serious life-long disabilities."

Although medical researchers are now trying to develop methods of immunizing people in advance of infection, the major emphasis in the foreseeable future will continue to be on finding and treating all possible sources of infection. In this connection, the Foundation said, "The final goal, complete elimination of these diseases, is at this point far from attained."

MORBIDITY REPORT FOR MONTH OF NOVEMBER—1959

Disease	1959 Nov.	1959 Oct.	1958 Nov.	Most Cases Reported From These Counties
Diphtheria	0	0	0	
Scarlet fever	140	158	128	Jefferson, Johnson, Polk
Typhoid fever	1	0	0	Montgomery
Smallpox	0	0	0	
Measles	37	33	574	Linn
Whooping cough	43	41	13	Clinton, Scott
Brucellosis	9	17	9	Dubuque
Chickenpox	323	123	168	Des Moines, Polk, Story
Meningococcic meningitis	2	2	1	Linn, Union
Mumps	93	52	171	Polk, Scott
Poliomyelitis	8	41	7	Clinton, Webster
Infectious hepatitis	14	7	13	Lee, Palo Alto, Polk, Scott
Rabies in animals	12	16	14	
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	30	51	52	For the state
Syphilis	102	111	85	For the state
Gonorrhea	72	112	75	For the state
Histoplasmosis	0	0	0	
Food intoxication	0	0	0	
Meningitis (type unspecified)	1	19	1	Polk
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	3	0	Dubuque
Salmonellosis	0	5	2	
Tetanus	0	2	0	
Chancroid	0	0	0	
Encephalitis (type unspecified)	0	3	3	
H. influenzal meningitis	0	0	1	
Amebiasis	1	1	1	Johnson
Shigellosis	0	2	6	
Influenza	2	4	0	Polk

IOWA COMMUNITY MENTAL HEALTH CENTERS



Date Established	*Name of Center*	*Present Locaton*	*County Area*	*Population Served**
1. March 21, 1950	Black Hawk County Mental Health Center	1028 Headford Ave. Waterloo	Black Hawk	127,049
2. September 15, 1952	Bremer County Child Guidance Center	Lutheran Children's Home, Waverly	Bremer	20,340
3. 1936	Des Moines Child Guidance Center	1206 Pleasant St. Des Moines	Polk	269,049
4. March 17, 1949	Des Moines County Mental Health Center	522 N. Third St. Burlington	Des Moines County	48,521
5. November 15, 1953	Lee County Mental Health Center	110 N. 8th St. Keokuk	Lee	45,980
6. October 10, 1949	Linn County Mental Health Center	105 Tenth St. N. E. Cedar Rapids	Linn	128,873
7. January 7, 1958	Marshall County Mental Health Center	1 N. Fourth Ave. Marshalltown	Marshall Hardin	58,488
8. January, 1956	Mental Health Center of North Iowa	215 N. Adams Mason City	Cerro Gordo Floyd Hancock Mitchell Winnebago Worth Wright	144,833
9. May 1, 1956	Northeast Iowa Mental Health Center	130½ W. Water St. Decorah	Winneshiek Allamakee Howard	49,674
10. April, 1949	Scott County Mental Health Center	57 Schmidt Bldg. Davenport	Scott	123,888
11. July 1, 1959	Story County Mental Health Center	223½ Main St. Ames	Story Boone Hamilton	97,805
12. November, 1959	Northwest Iowa Mental Health Center	Spencer	Clay Dickinson Emmet Palo Alto	63,098
			TOTAL	1,177,598

* "De jure" population estimated July 1, 1958. These twelve Centers serve twenty-six Iowa counties, population 1,177,598 or 42.3 per cent of the total.

INTERPROFESSIONAL RELATIONSHIPS

Both physicians and pharmacists should do as much as they can to promote mutual understanding and cooperation between their two professions. The misunderstandings that doctors and druggists have experienced were relatively unimportant when they occurred, and can now be forgotten.

It is interesting to note some of the changes that have occurred in each profession. Formerly, it was necessary for the pharmacist to compound each of the medications that the physicians of his community prescribed, as well as to dispense them according to the instructions that they gave him. In addition to compounding prescriptions, he sold "patent medicines" to his customers, preparations which, according to their labels, would cure almost anything, and which the public often bought in response to the promises set forth on those labels. The druggist also sold some other household health items.

Today, a physician seldom writes a prescription that the pharmacist needs to compound, for the pharmaceutical manufacturers have compounded the drugs into medicines, have conducted extensive tests and field trials to determine safety and effectiveness, and have packaged them under trade names. Thus, most prescriptions nowadays call for specific trade-name products. This system is much safer and even less costly for the patient than was the old one. When the physician had named each ingredient and told the druggist how much to use, the experiential basis for believing that the medicine would produce the desired effect was relatively slight.

Modern pharmacies are of two easily distinguishable types. In one kind, the prescription department occupies a small corner at the rear or at the side of a store filled, for the most part, with a tremendous range of merchandise that frequently rivals the stock in trade of a department store. The principal concern of the proprietor of such an establishment cannot be expected to lie in his prescription department. In the other type of pharmacy, the efficiency of the prescription department is the pharmacist's utmost aim, and the success of the store depends upon the completeness and courtesy of its drug service.

The "patent medicine" began to disappear from the shelves of all pharmacies many years ago, but "over the counter prescribing" seemed to replace it. This was brought about by the demands of the customers. Fortunately, this "creeping trait" is now being terminated by the pharmacy profession itself. If the customer presents certain complaints and asks for some medicine that will provide relief, the pharmacist now advises him to seek the services of his own physician. Also, many of the pharmaceutical manufacturers are noting on their wrappers or packages that their products "cannot be dispensed without a prescription."

Formerly, the physician was symbolized by his horse and buggy and by his black bag, the black bag containing a few drugs which the physician dispensed as he made his professional calls. In his office, there was often a cupboard or some shelves on one side of the room containing numerous brown bottles of pills and liquids, and he dispensed from them to the patients whom he saw in his office. Occasionally, he wrote a prescription when he wanted a special pill, ointment or suppository made up for one of his patients.

As time progressed and the physician exchanged his horse and buggy for an automobile, compounded medicines became available and he purchased modest quantities of them to dispense to his patients. Thus there was a time when prescription-writing declined to a very low rate.

But then after a few more years, except in communities where there were no pharmacists, busy doctors began to prescribe once more, rather than to dispense. It may have been a factor that, during the depression years prior to World War II, dispensing physicians usually had ended up by *giving* the medicines to their patients. But however that may have been, it is certain that new physicians entering practice at that time seldom had the requisite capital for laying in stocks of the medicines they had been trained to use. Thus, all of them wrote prescriptions for their patients.

In this way, prescription writing replaced dispensing at about the same time that pharmacists stopped "prescribing over the counter," and the two professions became professional allies and began to promote interprofessional harmony.

Still, however, we physicians are inclined to take

pharmacists too much for granted, and do not appreciate the full value of their services. Without doubt many of you have had occasion to call a pharmacist for information regarding certain medications that you wished to know more about. Perhaps you did not wish to take the time to look for the data yourself, or perhaps you did not maintain a file of such information. Didn't the pharmacist stop what he had been doing and make his knowledge immediately available to you?

In filling a prescription, a pharmacist helps to protect you. He checks the accuracy of the prescription as it is written, as to the strength of the medicine and the dosage, and he doesn't hesitate to call you if he thinks it may contain an error. And of course he does this without revealing his doubts to the patient. Further, he preserves your prescription as a written record of what medicine you prescribed for your patient, should a question ever arise, and as a professional man he cooperates with other pharmacists in serving you and your patients. Druggists don't do business as "cut-throat competitors."

In Des Moines, the pharmacists have a pharmacy call system, set up so that within 30 minutes every pharmacy in the city can be notified of any facts that may be important to them. For example, warnings can be circulated almost instantaneously about a forged prescription that someone is trying to get druggists to fill, or about attempts that someone is making to secure non-dispensable drugs such as barbiturates, paregorics or certain types of inhalators. The pharmacists all utilize the services of the secretary of the State Board of Pharmacy, who makes himself available by telephone at all times for advice on any question regarding the practice of pharmacy. And finally, the pharmacists have adopted a price and range schedule as recommended by the Iowa Pharmaceutical Association and approved by the Iowa State Medical Society.

Physicians and pharmacists have come a long way in developing interprofessional harmony. Members of both professions realize that the future of each group, as well as of the other allied professions, depends largely on their working together in the service of the public. Furthermore, they are aware of the value of free enterprise and of the necessity of defending it against socialization.

Plan Now to Attend

the S.U.I.—IAGP

Refresher Course for the General Physician

Iowa City

February 16-19

GENERAL PRACTICE SYMPOSIUM IN DENVER

Ten guest speakers will participate in a General Practice Symposium that will be held at the Cosmopolitan Hotel, Denver, January 10-16, under the joint sponsorship of the Colorado Academy of General Practice and the University of Colorado Medical Center. Fees for each of the last six days will be $10 each, or $50 for all of them. Through the courtesy of Lederle Laboratories, there will be no charges for the program, the luncheon or the other activities on the first day. Registration must be made in advance, through letters addressed to the Office of Postgraduate Medical Education, 4200 East Ninth Avenue, Denver 20.

At the Sunday, January 10, program, the topic will be "Medical and Surgical Problems in Old Folks," and the speakers will be Dr. Woodrow W. Morris, assistant dean of the S.U.I. College of Medicine; Dr. Beverley T. Mead, director of the general practitioner-psychiatry project, University of Utah College of Medicine; Dr. Elmer Hess, Erie, Pennsylvania, a recent AMA president; Dr. Leo M. Wachtel, Jacksonville, Florida; Dr. Robert B. Greenblatt, professor of endocrinology, Medical College of Georgia; Dr. Hilger P. Jenkins, clinical professor of surgery, University of Illinois College of Medicine; and Dr. Leo Dobrin, Forest Hills, New York.

The topics for the succeeding days will be as follows: Monday—internal medicine; Tuesday—pediatrics; Wednesday—surgery; Thursday—orthopedics; Friday—obstetrics and gynecology; and Saturday—atherosclerosis and diabetes. Guest speakers who will appear on those days include Dr. C. Wesley Eisele, director of the Laboratory of Physiological Hygiene, University of Minnesota; Dr. Henry T. Ricketts, professor of medicine at the University of Chicago; and Dr. Jack K. Wickstrom, professor and chairman of orthopedics, Tulane University. The remainder of the faculty will consist of 22 teachers at the University of Colorado Medical Center.

FILM ON STAPHYLOCOCCAL DISEASE CONTROL

The U.S.P.H.S. Communicable Disease Center at Chamblee, Georgia, offers the loan of a 35 mm. silent color filmstrip on the manifestations, prevention and control of staphylococcal disease.

An instructor's guide which accompanies the filmstrip includes bibliographies, a hospital check list, suggestions and sample forms for use in telephone surveys and several pertinent reprints. The filmstrip must be returned, but those who request to do so may keep the kit.



OUR PRESIDENT SAYS—

As this issue comes from the press, we shall all be thinking about the New Year and shall feel a renewed vigor and enthusiasm for carrying out our National Auxiliary theme "Individual Responsibility for Better Community Health."

Iowa was well represented at the Careers Workshop of the Midwestern Regional Council of State Leagues for Nursing, of the National League for Nursing. Of the several Iowa people, five represented the Medical Society and the Auxiliary.

According to the statistics given us there by Peter P. Klassen, Ph.D., of the University of Illinois, we have a big job ahead of us in recruitment. The population expansion ahead of us in the next 25 years alone would certainly crowd us to find people for the medical teams. We need nurses, technicians, therapists, etc., and even if we made the maximum use of the training facilities now available, we would be very short of personnel. Iowa, like most other states, does not have as large an enrollment as it could handle. Last year alone, the enrollment for nursing in Iowa was lower than it had been in several preceding years.

As you know, nursing schools are suffering growing pains. Since accreditation of schools of nursing is based upon sound educational principles, more and more faculties are recognizing the necessity of requiring that all students possess sufficient knowledge before rendering direct patient service, except under close supervision. This, therefore, means that the number of hours' work given by the first-year student has been reduced, and to offset that loss, the costs of first-year training have been raised for the student.

With higher nursing-school tuition and with the loss of the 50 scholarships that the Iowa Division of the American Cancer Society has been providing each year, we must do all that we can to search out potential nursing-school students in our home communities, encourage their ambitions through good programs in our Future Nurses and Paramedical Careers Clubs, and give them all possible help through *our own loan fund.* This is a project in which a small Auxiliary or even a member-at-large can perform a great service for the community and for the state. It takes only *one interested person* to work effectively at interesting a group of young people in the medical field! More and more schools now have counsellors, part of whose job is to help youngsters find occupations in which they can find enjoyment and can render valuable public service. They will welcome your help and will be glad to get the wealth of materials available through you.

Many county Auxiliaries will start 1960 with new groups of officers. Please make your list available to us at State Headquarters as soon as possible. Also, please forward your dues to Mrs. John Matheson, treasurer, as early as you can. Her address is in the masthead in this and each other issue of the NEWS. Perhaps you can get your county medical society to include your dues with its payment to the Headquarters Office as many other county Auxiliaries do.

Have you invited your councilor to attend one of your meetings? January and the New Year constitute the best time for checking on these items so that we may get off to a good start.

—MRS. E. A. LARSEN
President

ISMS SPECIAL CONFERENCE ON LEGISLATION

As your legislative chairman, I was most pleased to say a few words on the afternoon panel at the most impressive ISMS Special Conference on Legislation, in Des Moines on November 8. It was a pleasure to listen to Congressman Thomas B. Curtis, a man of personal courage who stands as fast to the principles of good government as our doctors do in their belief that the public interest in health will best be served by allowing medicine to continue expanding as a free enterprise. Mr. Curtis's address was published in the December issue of the WOMAN'S AUXILIARY NEWS. If you missed reading it, please look for your copy, and do so now.

The program of the Conference, from beginning to end, was one of education, dedication and a forward look, including "The Physician's Responsibility as a Citizen," "Political Action," "Problems of the Aging," and presentation of state and national programs for positive action. A summary of these latter addresses, prepared by Dr. John H. Sunderbruch, of Davenport, has been sent to all members of the State Medical Society as a direct mailing. Ask your husband to take special note of it. Furthermore, watch for other papers on these subjects which will be appearing in the feature entitled "In the Public Interest."

As I scanned the faces of the audience, I was pleased to note the interest and enthusiasm of the

doctors and doctors' wives who attended. It will be worth your time to seek out members who were present so as to gain a full picture of the scope of the meeting.

May I emphasize to you the importance of facing up to our present health problems, and remind all of you that we are concerned not just with maintaining the freedom of the practice of medicine, but with maintaining all of the freedoms of our heritage. This means understanding all our problems as a nation and calls for teamwork between our group and other like-minded people.

It is necessary, therefore, that we first take on the job of self-education, and second that we become politically active. We must promote and encourage the candidacies of men who we feel will seek the best for our country as a whole, rather than those who will champion proposals designed to benefit just some special groups.

Many false ideas are being formed about today's physicians, and it is up to us to throw the light of truth upon such misconceptions. The medical profession has lost some political power and influence. The public once was willing to accept physicians' opinions unquestioningly; now people constantly demand to be told why. It is up to the doctor and his wife to present facts, figures and arguments in support of medicine's attitudes.

A very fine kit on the medical profession's program on "Aging, a Community Responsibility" was presented at the conference. For those of you who can take action on this matter in your communities, or wish to help others do so, this kit is available from the State Office.

—JANE KING
Legislative Chairman

SPECIAL MESSAGE TO MEMBERS-AT-LARGE

An early payment of your dues will be appreciated. Please send your check, on or before February 1, to Mrs. John Matheson, treasurer. Her address is included in the list at the foot of this page. A handy, self-addressed envelope was sent you in November.

—MRS. E. A. VORISEK, *Chairman*
Members-at-Large

HOW MANY FUTURE PHYSICIANS WILL YOUR AUXILIARY HELP TO TRAIN?
Contribute to:
AMERICAN MEDICAL EDUCATION FOUNDATION

COUNTY AUXILIARIES

Buchanan

The Woman's Auxiliary to the Buchanan County Medical Society was organized on December 2 by Mrs. R. F. Nielsen, president-elect of the State Auxiliary, and Mrs. J. F. Gerken, a past-president.

The following officers were elected and installed: Mrs. Selig Korson, president; Mrs. N. L. Hersey, vice-president; Mrs. J. L. Mochal, secretary-treasurer; and Mrs. Richard M. Free, projects chairman. All of them live in Independence. Their interest and enthusiasm indicate that they will be great assets to the Auxiliary.

Dallas-Guthrie

The Dallas-Guthrie Medical Auxiliary held two meetings in the fall, one in September and the second in November, at Perry. Travel talks with pictures were enjoyed on both occasions. Dr. and Mrs. Wm. Seidler, of Jamaica, and Dr. and Mrs. C. A. Nicoll, of Panora, had vacationed in Hawaii, and Dr. and Mrs. A. G. Felter, of Van Meter, had toured Europe. They were most generous in sharing their experiences.

Mrs. R. J. Peterson, of Panora, has succeeded to the presidency of the Auxiliary. The officers elected for 1960 include: Mrs. R. F. Deranleau, of Perry, president-elect; Mrs. W. C. Wildberger, Perry, first vice-president; Mrs. D. W. Todd, Guthrie Center, second vice-president; Mrs. C. E. Porter, Woodward, secretary; and Mrs. Herbert Neff, Guthrie Center, treasurer.

Mahaska

The Mahaska County Medical Auxiliary met for a one o'clock luncheon on December 8 at the Downing Hotel, in Oskaloosa. Eight members were present, and Mrs. Joseph Lederman presided.

The members of the Auxiliary made plans to help as hostesses for the Christmas party for the Mahaska County Hospital on Friday, December 18, at the Elmhurst Country Club. The selection of a recipient for an Auxiliary Christmas gift was discussed subsequently at an informal meeting at the home of Mrs. L. F. Catterson. Mrs. Lederman reminded the group to give some thought to the nomination of a recipient of the Community Health Service Award.

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. E. A. Larsen, 323 Oak Street, Centerville
President-Elect—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. H. C. Merillat, 116 Lincoln Place Drive, Des Moines 12



Doctors Should Take an Increasing Interest in Politics

During the past two decades, it seems, most Iowa doctors of medicine have mistakenly assured themselves that they could discharge their full obligation as citizens merely by casting their ballots on election day. Throughout the remainder of the country, however, doctors haven't taken that attitude so nearly unanimously, either in the distant past or recently. Five physicians were among the signers of the Declaration of Independence—far more than might have been expected—and in the 183 years since then, 325 of them have served the nation in the U. S. House of Representatives, and 37 have been members of the U. S. Senate. Almost innumerable doctors, of course, have been elected to state or local legislative and administrative posts. Furthermore, it is worth noting, physician participation in government hasn't ebbed appreciably, if the number of doctors holding seats in the 86th Congress is a reliable measure, for there are six of them—approximately an average representation.

Yet, no Iowa doctor has been a member of Congress within recent memory, and for that matter, no doctor has been a member of the last several sessions of the General Assembly of Iowa.

It was not always thus. Let's look at a random sampling of the Iowa Legislatures prior to World War II. During the 1907 session, there were seven doctors among the legislators. Three of them were senators (Drs. John A. McKlveen, Chariton; Elbert W. Clark, Grinnell; and J. A. DeArmand, Davenport) and four were representatives (Drs. James F. Clarke, Fairfield; Jesse D. Elliott, Hawleyville; P. J. Jewell, Decorah; and Charles L. Marston, Mason City). At the 1935 session, the doctors totaled five. There were three doctor-senators (Drs. Carl Aschenbrenner, Pella; J. W. Billingsley, Newton; and Morris Moore, Walnut) and two doctor-representatives (Drs. E. A. Moore, Harlan; and C. Colfax Smith, Clarksville). At the 1937 session, the doctors were really numerous. There were eight of them. Dr. Aschenbrenner no longer was there, but Dr. Billingsley, the two Drs. Moore and Dr. Smith had returned, and there were four new physician members (in the Senate, Dr. Frederick C. Schadt, Williamsburg; and in the House, Dr. John R. Gardner, Lisbon; Dr. George H. Keeney, Mallard; and Dr. William Kerr, Randolph).

DOCTORS MUST NOT BE TOO BUSY TO RUN FOR OFFICE

One sort of political action that doctors should resume is that of offering themselves as candidates for the U. S. Congress, the Iowa Legislature and other elective offices. Quite apart from the influence they would have if elected, their entering such contests would provide evidence of doctors' willingness to be citizens as well as medical practitioners. On the other hand, if doctors continue permitting themselves to be regarded—and indeed continue to regard themselves—as too busy to take active parts in the processes that make our government function, just so long will they have a less than maximal effectiveness in presenting and getting support for their views in the U. S. Congress and in the Iowa Legislature.

Regardless of their political affiliations, physicians can all applaud Dr. Floyd M. Burgeson, of Des Moines, for his decision to seek his party's nomination for the congressional seat of the Fifth District in the primary election that will be held later this year. He is a credit to his profession, and he is sure to bring favorable attention to Iowa medicine as his campaign progresses.

THEY CAN JOIN FORCES WITH OTHERS

A reawakening of Iowa doctors generally to their responsibilities as citizens would be especially opportune nowadays because the public's at-

titude toward learning and the professions has undergone a profound change in the past 40 years. It is obvious that the public has substituted an attitude of inquiry and skepticism for one of unquestioning respect for the opinions of doctors of medicine, even in medical matters. The profession's traditional role of leadership in the health field is being challenged by many lay groups and individuals.

Medicine's problems have not been due solely to apathy and reticence on the part of physicians, or to changing times, of course. There can be little question that along with other groups, medicine has been the target of deliberate "smear" attacks. In consequence, doctors must prove the soundness of their positions on specific issues, reassume constructive leadership and work at persuading others to their point of view.

In concert with those of their fellow-citizens who hold similar politico-economic views, physicians can become additionally influential. Along with other groups, they must abandon their habit of each "tending to his own knitting," and join forces on issues which have appeared superficially to concern only a relatively few individuals but actually involve important matters of principle.

Physicians, and all others of like mind, need to join together, and indeed already are joining together, for the preservation and strengthening of the system by means of which this nation achieved prosperity and world leadership, and without which it cannot hope to retain those blessings and that position. They are participating in political-action training courses in Des Moines and other cities, seeking to learn the technics of precinct organization and the methods that are most effective in getting their fellow citizens to register and to vote. There is no reason why such classes cannot be held in every county in Iowa!

DOCTORS SHOULD SUPPORT GOOD CANDIDATES

Although Iowa doctors should give serious consideration to becoming candidates for political office, it is of even greater importance that they exercise their full rights of citizenship in encouraging and supporting the candidacies of others. Lawmakers are more and more frequently being called upon to consider proposals affecting health matters, and it is highly desirable that at least a few legislators have some professional training and experience in medicine that they can share with those who have not. However, medicine would never urge that there be a disproportionate representation of doctors or of any other group. Most of our lawmakers are, and should be, men and women from other walks of life, varying in their training and experience.

At any one time, only a few physicians will be able to make themselves available as candidates for office. But *every* doctor can make his personal and financial support available to qualified candidates.

Doctors should seek to win votes for and should make contributions to the campaign funds of layman candidates for office who aren't already committed to the special interests of a segment of the public, but who are certain to consider the welfare of all the people all the time. Lawmakers of that sort are sure to give physicians a full hearing on each of the subjects in which they take an interest. Campaign contributions are an altogether essential part of political activity. Everyone must realize that radio and television time, newspaper space, printing and postage all cost money—more than any independent candidate can spend out of his own pocket. By helping modestly to meet those expenses, physicians can help the candidate to *maintain* his independence.

THE PROSPECTS OF SUCCESS ARE BRIGHT

Medicine's allies on the side of free enterprise are strong ones, and they are already at work. The United States Chamber of Commerce has announced its opposition to the Forand Bill, and is currently sponsoring the political training courses to which reference has already been made here. For several years, the Farm Bureau Federation has sponsored a Freedom Crusade, and has demonstrated its willingness to fight for the lifting of governmental controls in areas beyond the confines of agriculture. The insurance industry and the insurance agents, other professional groups and many otherwise-affiliated individuals are beginning to unite in opposition to the "welfare state" concept, and to undertake measures in opposition to it.

As was pointed out in Des Moines on November 8, at the ISMS Special Conference on Legislation, by Dr. Ernest B. Howard, assistant executive vice-president of the AMA, there are indications that the "welfare state" forces have spent themselves, and have no new objectives that will win popular support. The time, then, is certainly ripe for a reaction against those forces which have thriven on government spending to the point that inflation and the unbalanced budget are becoming worrisome to "average voters."

Another encouraging sign is the growing willingness of the public to consider the facts. Statistics are of greater political significance than formerly, and true figures are indicating the preferability of "the voluntary way" in the solution of many of our problems.

Finally, more and more thinking people are beginning to realize that the fundamental race between the United States and Russia is not in the production of armaments or even in the furnishing of the physical necessities and luxuries of life. Rather, it is in enabling citizens to live happy, dignified and comfortable lives. These thinking people are beginning to recognize that America's lead in that race consists principally of the fact that it still permits *individual freedom*. With increasing clarity, they are coming to see that each time America imposes a new restriction upon its citizens, it loses a lap to Khrushchev & Comrades.

THE DOCTOR'S BUSINESS

Give Yourself Ample Time

HOWARD D. BAKER

WATERLOO



In recent years, great emphasis has been placed upon the importance of one's having adequate capital for income *at* retirement age. Too little importance, however, has been attached to the achieving of a degree of financial independence *in advance* of retirement age. This is a grave error.

The years between 45 and 64 have become the truly critical ones in a man's financial life. The young man in his thirties who fails to start saving and investing, contenting himself with the notion that there still is "plenty of time," is operating under a grave delusion. Facts indicate that if the "average" person has not accumulated a reasonable amount of capital by age 45, he is unlikely ever to do so. He has started his search for financial security at too late an hour, and the odds are strongly against his gaining sufficient momentum to make up for lost time.

There are two reasons for believing that a man must begin saving and investing early. One is pure arithmetic, and the other reflects the economic and psychological influences under which we live. The arithmetic is simple. We all know that a dollar saved today is worth considerably more than a dollar that we *may* save 20 years in the future. Today's dollar, invested wisely, will earn more dollars as the years go by.

INVESTMENTS THAT WILL ACCUMULATE TO $1,000 AT AGE 65

(Assuming a 5% compound interest factor)

$142	invested at age	25
$181	invested at age	30
$231	invested at age	35
$295	invested at age	40
$377	invested at age	45
$481	invested at age	50
$614	invested at age	55
$784	invested at age	60

Stated another way, $181 invested at age 30 will grow to $1,000 at age 65, assuming a five per cent increment. The same $181 invested at age 50 will grow only to $375. If invested at age 60, it will grow merely to $232.

It is obvious from these figures that one dollar invested at age 30 will accomplish as much as two dollars invested at age 45, and as much as nearly $4.50 invested at age 60. As the rate of return and appreciation goes up, the value of early investing is magnified.

The greatest allies a man has in the capital-building process are (1) time and (2) return on capital. Both must work for him if he is to accomplish his financial goals. Take away time, and capital is denied the opportunity to grow. If the burden is placed upon capital—i.e., if too little money must achieve too much too soon—disproportionate risks must be undertaken.

Take away yield—the opportunity to invest productively—and only a very few men could set aside enough from their earnings to accomplish any degree of financial independence. It is capital at work, not men at work, that brings eventual financial independence. True, men must work and save in order to provide the basic capital, but afterwards the degrees of financial independence they attain will be directly proportional to the time that remains for the capital to grow.

Let's call a spade a spade! Can any man say that he is financially successful, whatever his income from his profession, when he has little or no income to report on page 3 of his Federal Income Tax Return? A man of 45 should be well on his way toward accomplishing his financial objectives —not just starting his pursuit of them.

The individual who contents himself with resolving to start his investment program *after* he finishes equipping his home luxuriously, *after* he has paid for his children's education, and *after* he has toured Europe and realized his other recreational dreams, is due for a rude awakening. Both time and simple arithmetic are building up strong odds against him.

The ingredients for success are an early start and tenacity in carrying out one's plan. These things will assure accomplishment; complacency and postponement will assure failure.

MEDICAL HISTORY



Some Reminiscences of A Northeast Iowa Doctor

FELIX A. HENNESSY, M.D.

CALMAR

All of the regions of Iowa have some medical history, and it is my intention to recount a little of that which belongs to the counties in its northeastern corner.

The earliest of our medical history in this area began in the 1830's when Iowa was a territory and when its northeastern corner was dependent, militarily, upon Fort Crawford (established in 1816) across the Mississippi River at Prairie du Chien, Wisconsin. That old fort is well worth visiting, for there one can notice a great many things of medical as well as of general historical interest—cemeteries that resemble those in New Orleans where the low and marshy terrain required that the vaults be built above the surface. As one reads the grave markers, he soon realizes that many young mothers gave their lives following childbirth, as a result of puerperal infection or childbed fever, for they died before the time of woman's greatest benefactor, Semmelweis, whose findings fell on deaf ears and were not accepted until after his death as a dementia patient in an asylum.

A DISTINGUISHED NEIGHBOR

At Fort Crawford in the 1820's and 1830's, there were two U. S. Army medical officers, a Dr. Lull and the illustrious Dr. William Beaumont, the pioneer physiologist. Whether or not Dr. Beaumont treated many patients from across the river in Iowa, it can no longer be said, but the fact that he did most of his important research work (56 of his 60 published experiments in gastric physiology and function) less than a mile from the Iowa shore will justify somewhat more than a bare mention of his having spent several years in the vicinity.

At one of his previous posts, on Mackinac Island, Dr. Beaumont had been called upon to treat a Canadian Indian trapper, Alexis St. Martin, for a gunshot wound in his side. Beaumont's success in saving the man's life wasn't unprecedented, and neither was his leaving a permanent opening into the patient's stomach, but Beaumont was the first man to avail himself of the opportunity that was thus provided for studies of gastric function. Somewhat interruptedly, from 1825 until 1833, Beaumont kept St. Martin with him, and designed and performed experiments such as had never before been attempted.

The following evaluation of his work was contained in an address by Walter J. Meek, M.D., professor of physiology at the University of Wisconsin, delivered at Fort Crawford on August 30, 1931:

"Beaumont never heard such terms as 'protein,' 'enzyme,' 'calories' or 'vitamins.' To us who are deluged with publications it is amusing to hear Beaumont say that his "age is prolific of works on physiology," and for that reason he must assign sufficient motives for offering the public still another book on the subject. . . .

"He found that finely divided foods, both animal and vegetable, digested most readily and that blood had to be digested the same as meat. These were not isolated facts to him, for he related them and concluded that the "ultimate principles of nutriment are probably always the same whether obtained from animal or vegetable diet." It was not until the time of Emil Fischer in the present century that we even understood these words of Beaumont, but now we know that he was thinking clearly and correctly far ahead of his time. . . .

"He was interested in the time it took Alexis to digest his foods, and the tables he prepared showing the lengths of time various substances remain in the stomach are still valuable. . . .

"The work of Beaumont appeared in time to settle one of the famous controversies of his time, namely whether the stomach and gastric juice existed to dissolve the food or whether the stomach was an organ for grinding and fermentation. Beaumont found that pure gastric juice kept in a bottle as long as a year still had the power to put meat and vegetables into solution. He concluded therefore correctly that the juice was a solvent.

. . . He also . . . helped settle the old controversy as to whether the acid was acetic, phosphoric or lactic. It was none of these, but hydrochloric."*

Truly, Dr. Beaumont was a great pioneer physiologist. The small hospital at Prairie du Chien used by Dr. Beaumont still stands, and it should and probably will be preserved as a shrine to this great medical scientist who worked with very limited facilities, in marked contrast to those with which laboratories are equipped today.

THE NORTH IOWA MEDICAL SOCIETY (1859-1903)

During the 1830's, another physician, Dr. Frederic Andros, appeared at Fort Crawford. Then, Fort Atkinson (1840-1849) was established in the Iowa Territory, and an Indian agency was set up in connection with it. The two forts were connected by a military trail that followed a route which highways No. 18 and No. 52 occupy today. At the start of this period there were about 80 white settlers on the Iowa side of the Mississippi, and their numbers increased every year, as more of them crossed the river in the winter, while it was frozen, and laid claim to the new farming area. Fort Atkinson had been built to protect the whites and the friendly Winnebagos from the Sioux, who made forays into the district and killed the Winnebagos in large numbers.

Dr. Andros located near what is now Garnavillo, Iowa, and practiced there for several years, attending to the medical and surgical needs of both the red people and the white. With advancing years, he moved to the Dakotas, prefering to keep to the edge of civilization as it moved west. Later he made his home in Minneapolis, where he died at the advanced age of 90 years.

Some of the people whom he served were to gain prominence. While calling at the home of Dr. Amelia Sherman and her sister, Althea Sherman, in the small town of National, Iowa, I learned that he had delivered them. Both women graduated from the University of Michigan. Dr. Amelia did most of her work in the field of mental illness under Dr. Gershom Hill, and her sister was a nationally known ornithologist, recognized as an authority on the life and habits of the chimney swift. Then, several years ago, while attending a medical meeting, I was asked by Dr. Esmond Long, a distinguished pathologist and the director of the Phipps Institute, in Philadelphia, "How far are you from McGregor, Iowa?" When I replied, "Forty-two miles," he said, "My mother was born in McGregor, and her father, a Judge Clark, was the first district judge in Clayton County after Iowa was admitted to the Union as a state."

The North Iowa Medical Society was formed in June, 1859, and Dr. Andros was a charter member. It continued in existence until about 1903, and after a few years, an organization known as the Northeast Iowa Medical Society carried on its work until the present state and county medical societies were organized. It was my privilege to serve as secretary of the latter group for several years, and in that capacity I came into possession of the minutes of the North Iowa Medical Society and presented them to the Medical Division of the Iowa State Historical Library. I trust that they will be permanently preserved. The papers contain interesting discussions on pneumonia, diphtheria and malaria legibly written in penmanship that would be the envy of any high school pupil today.

In the account of a meeting held on December 5, 1877, one learns that the business session concerned a bill to be presented at the next Legislature, designed to regulate the practice of medicine in Iowa. Remarks in favor of the measure were made by all the members present. On the afternoon of the same day, Dr. Andros read a highly instructive and interesting résumé of his practice over a period of half a century, mostly in this state, and dwelt in some detail upon the treatment of the malarial fevers that seemed indigenous to the region. He spoke in the strongest terms in favor of the use of arsenic in those disorders. More recent observations have indicated that occasional malarial mosquitoes must have been imported on the river boats of that time.

At the same meeting, Dr. J. Wilbur Curtis presented the following resolution, which was adopted by unanimous vote of the Society:

"Be it resolved by the North Iowa Medical Society that diphtheria is a disease eminently contagious and infectious in its character; that the habit of exposing the diphtheritic corpse to the view of healthy persons is a most reprehensible practice needlessly exposing them to the perils of contagion; that the assembling of large bodies of persons during an epidemic should be interdicted; and that the established rules of hygiene should be rigidly observed."

This was an early development in preventive medicine, prior to the discovery of the causative diphtheri bacillus.

I feel that we have never shown our deep appreciation for these pioneers who undertook to protect the well and cure the sick even though they had little to work with and had slight information about the diseases they were combatting. Besides, they had to travel from patient to patient over unimproved trails, rather than highways, probably seeing one-fourth of the number of people whom a modern physician sees in a day. It is impossible for us to realize the physical exhaustion and mental anguish they must have experienced in times of scarlet fever and diphtheria epidemics, when two or three members of a family were carried away in one week.

* Meek, W. J.: Dr. William Beaumont, physiologist. WISCONSIN M. J., **30**:868ff., (Oct.) 1931.



Dr. Felix Hennessy, of Calmar (right), was honored by the Winneshiek County Medical Society and the Iowa State Medical Society at a dinner in Decorah on September 5, 1957, marking the fiftieth anniversary of his entry into medical practice. Dr. Fred Sternagel, of West Des Moines, then ISMS president, gave him a 50-year service pin. Dr. Hennessy was president of the State Society in 1940. The lady in the picture is Dr. Hennessy's daughter, Mrs. S. J. Sisk, of Chicago.

DOCTORS CAME, BUT THEY ALSO WENT

Over the years, northeast Iowa has had a surprisingly large number of physicians, or so it seems when one notes the relative few who serve the health needs of the district today. One of the reasons for the length of the list is that many of them practiced here no more than briefly before moving on to other places, near or far away. Also, as I have said, when each doctor could care for only a few people, more doctors were needed. Just to illustrate, I shall call the roll of the physicians who have practiced briefly or lengthily in my own town, Calmar. The first of them, Dr. J. S. Roome, came originally from London, Ontario, and was a graduate of the University of Michigan. He arrived by railroad in 1866, and his practice extended well into the turn of the century. When I arrived, in 1907, there were other doctors, but they didn't stay long. They were a Dr. Grist and two brothers, Philip and Alphonse MacLaughlin. Later, Dr. Fred Amkrum came, but he stayed only a year. Dr. E. M. Heflin also stayed a short time. Dr. C. D. Horton, uncle of V. J. Horton who practiced in Fort Atkinson, moved here and was well received. Dr. E. A. Ellingson, an eclectic physician, was a Calmar servant for more than 40 years. Dr. Galen Boller had a large practice here for four years before going to California for research work. Afterward, Dr. Paul Neagle arrived.

Thus, in the span of 93 years, Calmar (1950 population: 937) has had no fewer than 10 doctors

of medicine, but only three or four of us have made careers of serving the community.*

LET'S PRESERVE THE BEST OF THE OLD

It seems that the vision and ideas of these sturdy practitioners have remained with us. Their discussions of medical education and advancement have carried over quite well into the present generation, one which is advancing in the same fields with much praiseworthy effort in basic research, a type of work that is very expensive as viewed by those who are not fully informed, but one in which the results being achieved are of incalculable value.

I note with satisfaction the great advances made in recent years by our own S.U.I. College of Medicine, though its work has been somewhat retarded by the paucity of state appropriations. Fortunately, however, the funds at the disposal of the College of Medicine have been replenished to some extent by our voluntary health organizations, which have been a great factor in so many fields of research.

In the first 20 years of my practice, there was a gradual improvement in the tools with which doctors worked, and that improvement has continued to the present day. When I had been in Calmar for only a few years, I took a vacation trip with a friend to the western part of the Dakotas, and had an experience there which added to my humility and impressed forcibly upon me the limitations of medicine at that time. It also gave me an appreciation of the simple halfbreed Indian and his philosophy.

We were in a pioneer area somewhere in the Rosebud or Standing Rock Reservation, at a new town with no doctor. At about ten o'clock one night, a cowboy rode into town and wanted a doctor to care for his foreman who had been seriously injured in an accident out on a butte. As the man was attempting to lasso a horse, the animal he was riding threw him and afterwards rolled upon him. Since no one else was available, I had to ride horseback some 30 or more miles to the ranch where the injured man lay.

He had suffered a crushing injury to the right chest involving the lung and liver. The only means of treatment was my hypo, and I gave him an opiate that he told me was worth its weight in gold. We brought him to town in a surrey, and on the way he told me that he didn't know the letter A from the impression of a bull's foot, but that he was educating all of his children—a fact that I verified later. The next day he was taken to a hospital some distance away, where he was left in the hands of a competent doctor, but I learned later that he died there from a puncture wound of the liver.

Gentleness and kindness are great assets in the practice of medicine, and they are accorded a great measure of gratitude. Though nowadays we have facilities, instruments and medications through which we can save lives and restore the health of patients for whom, in earlier days, we could have done no more than ease the pain of dying, we mustn't discard the compassion which once was the doctor's principal stock in trade. The medical profession must have perspective and wisdom, and must avoid selfishness in a strange new world.

Changes in medical education have broadened the mature student, and while each such youngster has a good scientific and social grounding, I trust that he will never be too far removed from intimate personal relationships with his patients or will ever forget to accord them a genuine respect. Occasionally, young doctors today seem a bit lacking in these particulars, perhaps because with the accumulation of medical experience human physiologic responses are becoming increasingly predictable. Thus, this rapid growth induces the doctor to neglect exercising the compassion to which he pledged himself when he took the Hippocratic Oath.

These statements of mine aren't a condemnation of modern scientific medicine, but are a plea for a better balancing of the old and the new in our profession. I ask that we take care not to lose sight of the complete man, with his God-given individuality and freedom. Respect for the individual always has been a central concept in medicine, just as it has been central in the American philosophy of government, and it must remain so.

THERE STILL ARE MANY TASKS LEFT UNFINISHED

Great strides have been taken in the development of curative medicine, and now the preventive

* Editor's Note: In a centennial booklet entitled "Calmar . . . Cradled by the Gods! 1850-1950," John Clifford Eichorn, Ph.D., a protestant clergyman and a motion picture exhibitor in the town, described Dr. Hennessy as follows:

"Not every community can boast of an M.D. of the prominence and permanence of the Calmar physician, Dr. Felix A. Hennessy. A graduate of the University of Iowa at the age of 24 in 1907, he deliberately sought a small town practice. To get through college the young doctor taught school, slung hash and planted corn. Completely 'sapped out,' he desired something easy for a while so he could get back on his feet physically; so he came to Calmar for a year or two and is still going strong after forty-three years of continuous service. He has yet to get the 'rest' he was seeking. . . .

"His is a paradoxical life. Given often to moods, he is most stable for good. A strong family man, he lives alone with the memory of his beloved wife and looks forward to the visits of his daughter. An ardent Catholic, liberal and generous in his humanitarian approach, he is a Republican by choice and work.

"One of his patients, who recalls meeting the doctor during his first year in town and who has had him all these years as a family physician, said to the author, 'Dr. Hennessy is a perfect gentleman—always a sense of humor, and even if you got something wrong with you, Doc can find a joke. He's as good as they come.' . . .

"Locally, Dr. Hennessy has been a member of the Winneshiek County Medical Society for forty years and has held every office. . . . In Calmar he has been president of the Board of Education. Also, he has served for years on the County Board of Education. . . .

"State and national groups have benefited by his leadership. As a member of the State Medical Society and a member of [its] Council he has handled many ethical problems. He served as [its] president during 1939-40. . . . Further, he has been president of the [state] T.B. Society. . . . Various societies list him as a member such as Phi Rho Sigma, Alpha Omega Alpha National Honor Society, and the American Association of General Practitioners. He also helped to organize Blue Shield in the state."

side deserves further attention. It has been very noticeable that there has been a lack of public interest in our many immunization programs, especially polio vaccination, since according to the published reports no more than half of the people who should have been immunized have received the necessary numbers of shots. Probably, by denying ourselves just one atomic bomb or guided missile, we could provide protection for all of those people, whether they could afford it or not.

It seems that some plan should be worked out for making preventive medicine completely effective, as regards the diseases for which preventives have been found, thus saving lives and lessening the burden of the handicapped.

Mental health is becoming increasingly difficult to maintain as life becomes more complex and as many of our families disintegrate, but the bulk of doctors aren't accepting their full shares of responsibility in that area. Recently, when I attended a very instructive clinic at one of our state mental hospitals, I was distressed to note the small number of practitioners in attendance at the conference. The fact that so many had stayed away was evidence of a too prevalent lack of interest. The subject for discussion was schizophrenia—surely a vital one nowadays—and the men who had been assembled to discuss it were authorities.

Organized medicine is something else in which doctors should take greater interest. For some 30 years it has amazed me to find how few doctors take active part in medical society work, apparently not because they lack opportunities, but rather because they feel they cannot leave their practices lest someone have need for their services. In every segment of our lives, we must give before we gain. Payment of medical society dues is not enough; all of us must participate in solving the problems that all doctors face.

It has been my privilege over the years to visit many great clinics and to hear master teachers. Probably my most frequent trips have been to the great clinic in our neighboring state, where I had fine relationships with Drs. William and Charles Mayo, who proved to be loyal friends with humanitarian hearts.

CONCLUSION

In conclusion, I want to predict that even though social changes cause general practitioners to diminish in number, they will always have important places in their communities and in the hearts of their fellow citizens. We in the profession readily appreciate the contributions that specialists make, but an excess of specialization may cause a degree of frustration in the minds and thoughts of the masses who need our services.

Finally, we should always remember that the Science of Life is knowledge, but the Art of Life is behavior. Medicine is a profession that undertakes to help people get the best out of life, whether they possess worldly wealth or whether they have no more than the riches of heart and mind.

It has been my great privilege to have lived in the first half of the Twentieth Century and to have seen the great developments in medicine. Although we are facing unsolved problems such as heart disease, cancer and mental illness, I feel confident that, with continued basic research, we shall make great advances in solving them. The next half-century will bring new medical advances, if we can live in peace, for scientists speak a universal language and can work in cooperation if diplomats and politicians succeed in maintaining the necessary conditions.

UNIVERSITY HOSPITALS STATISTICS

According to figures released on November 25, University Hospitals, Iowa City, admitted 24,574 persons during the 1958-1959 fiscal year, an increase of 500 over the figure for 1957-1958. The outpatient visits for the period, however, totaled 146,300, an increase of more than 6,000.

Other figures included: 85,881 x-ray examinations and treatments; 443 954 laboratory examinations; 9,855 blood transfusions; 45,552 physical therapy treatments; 22,552 patients transported by University ambulances; and 4,733 medical social service cases handled.

ENURESIS AND THE ALLERGIES

In the December issue of GP, Dr. James C. Breneman, of Galesburg, Michigan, claims to have found that allergies were the cause of enuresis in 60 consecutive cases.* He estimates that about 5,000,000 children in the United States are enuretic.

He began by administering an anticholinergic drug combined with histamines, and was able to control the condition in 10 of 26 patients. Then he began laboratory studies, and they showed, he says, "that the bladder is not immune as an allergic shock organ, but instead is a fertile site for incidental infection, not unlike the nasal or sinus mucosa." His studies also showed that non-allergic conditions, including chronic inflammation and structural defects, may also cause enuresis. After he had used elimination diets to spot allergic conditions and had removed offending foods from the children's meals, he found that no further therapy was required.

In order of frequency, the foods to which Dr. Breneman says he traced enuresis are: milk, wheat, eggs, corn, chicken, oranges, pork, tomatoes, peanuts, beef, apples, fish, berries, peas, chocolate, rye and cauliflower. Allergies to milk, wheat or eggs accounted for about 60 per cent of the incidence. He points out that the offending foods are usually proteins having a high histadine content. If diet control is ineffective, he urges further urologic and neurologic investigation.

* Breneman, J. C.: Allergic cystitis: cause of nocturnal enuresis. GP, 20:84-98, (Dec.) 1959.



Respiratory Obstruction In Infants and Newborns

F. JOHNSON PUTNEY, M.D.

PHILADELPHIA, PENNSYLVANIA

Respiratory obstruction in the newborn or infant commonly requires prompt diagnosis and treatment in order to save the child's life. Since many factors enter into respiratory obstruction, the exact diagnosis can be difficult, and measures may be instituted which have little or no effect upon the basic pathologic condition. The majority of the lesions occurring in infants and newborns are congenital in origin, and when respiration is embarrassed, obstruction is a prominent feature because of the small caliber of the air passages.

Although oxygen is a prime need in the pulmonary alveoli, it is equally important that there be an unobstructed passageway to allow the oxygen to reach the desired destination. At times, youngsters with respiratory obstruction are placed in high oxygen concentrations to no avail, for the oxygen is unable to reach the absorptive surfaces of the lung no matter how high the concentration. In the treatment of asphyxia neonatorum, it is necessary to establish an adequate airway as well as to administer oxygen.

It must be determined first whether this difficulty in breathng is due to a lesion of the central nervous system, of the cardiovascular system or of the respiratory system. In some cases, attention has been directed toward the respiratory system when the difficulty was with the central nervous system, and no benefit resulted from the treatment. Once the lesion has been located in the respiratory tract, teamwork involving a pediatrician, a roentgenologist, a bronchologist and a thoracic surgeon is generally needed to arrive at the correct diagnosis and subsequent treatment. In patients with obstruction to the respiratory system, fluoroscopic and roentgen study both in inspiration and expiration, barium swallow, bronchography, planography and angiocardiography may all be needed in determining its cause. Bronchoscopy is of fundamental value in many cases, and is done in small infants and newborns without anesthesia to insure safety. The development of smaller instruments of proper length and caliber for an infant's tiny larynx and tracheobronchial tree have facilitated the use of bronchoscopy more often and with less danger of causing a traumatic inflammation that might increase the obstruction. The chief value of the bronchologist's work is in determining the point of obstruction and in facilitating either removal or circumvention.

The airway may be divided into three general areas: (1) nasopharyngeal and pharyngeal, (2) laryngeal and (3) tracheobronchial (Table 1). The character of the voice or cry is important in differentiating the site of the lesion. In infants presenting feeding problems with or without bouts of cyanosis, obstruction to the airway must be considered as a possible cause. In an infant who is not able to nurse properly or secure uninterrupted feedings, or whose coughing or breathing difficulty interferes with the intake of fluid, a congenital anomaly of the air passages may be responsible.

NASOPHARYNGEAL AND PHARYNGEAL OBSTRUCTIONS

In high obstructions, such as choanal atresia, pharyngeal paralysis, tumors at the base of the tongue and micrognathia, nursing causes episodes of cyanosis, for the infant must utilize his postnasal and pharyngeal spaces to receive air while feeding. There is also a stertorous rasping sound, and in pharyngeal paralysis no gag reflex exists.

Choanal atresia is a congenital defect in which

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one or both nasal cavities do not open into the nasopharynx because of the persistence of cartilage or bone at the posterior opening of the nose. The condition may be either unilateral or bilateral, and either partial or complete. The child experiences nasal obstruction from birth, and has great difficulty in nursing, for soon after applying the sucking force the baby has to stop nursing and open his mouth in order to get enough air to continue breathing. When the atresia is bilateral and complete, thick nasal discharge is also present. The diagnosis can be easily proved by passing a small catheter or probe from the nose into the throat. If the obstruction is partial, it may be necessary to demonstrate it by instilling iodized oil into the nasal cavities and employing roentgen films. Surgical treatment is indicated, and the establishment of even a small, temporary airway —provided definitive treatment cannot be carried out—will allow the child to nurse properly and to develop along normal lines. At a later date, surgical correction can be undertaken.

Hypertrophied adenoids in young children, particularly in allergic ones, not only cause serious difficulty with breathing but also makes respiration labored, with an increase in nasal secretion and a tendency towards the development of nasal and sinus infection. In extreme cases, nursing is inhibited because of the child's inability to get air through his nose when his mouth is closed. These abnormalities usually occur somewhat later than the newborn period when the youngster is taking soft and solid foods. The loud snoring sound that these youngsters produce while sleeping raises a suspicion of the diagnosis, and one can confirm it by passing his finger into the nasopharynx.

In some instances, the mandible fails to develop, and the marked recession of the bony structures produces respiratory obstruction. Breathing is improved as long as the tongue is depressed or held forward. In other forms of respiratory difficulty, the position of the tongue matters little in relieving the obstruction.

An abscess of the retropharyngeal space in infants is most commonly caused by suppuration of the retropharyngeal lymph nodes. These lymph nodes drain the nose, sinuses and nasopharynx, and an infection of these regions progresses to the retropharyngeal nodes. In older children, a chronic abscess may be due to tuberculous caseation of the retropharyngeal lymph nodes or to tuberculosis of the upper cervical vertebra. A retropharyngeal abscess is manifested by marked difficulty and pain on swallowing, and by respiratory obstruction. The voice is muffled, and when large, the swelling encroaches upon the larynx. When the larynx is obstructed, extension of the head relieves some of the respiratory dyspnea. No difficulty is encountered in opening the mouth, so that inspection reveals the swelling of the posterior pharyngeal wall and palpation often reveals fluctuation. Lateral roentgenograms of the neck are helpful in the diagnosis. The treatment is incision and drainage in the head-low position, so that there will be no aspiration of pus when the abscess is opened. The incision is carried out without anesthesia, and suction is applied immediately to remove any purulent material accumulating in the pharynx. After incision, the opening can be enlarged by dilatation with a hemostat in the wound. The chief complication occurs from suffocation, either because of the large size of the swelling, because of direct extension of the inflammation into the larynx, or because of aspiration of blood and pus when the abscess is opened or ruptures.

Tumors at the base of the tongue—particularly cysts, hemangiomas, lymphangiomas and lingual thyroids—are common sources of respiratory obstruction. Occasionally one finds a thyroglossal cyst manifested by swelling at the foramen cecum and obstructing the airway at the base of the tongue. Palpation is advantageous, but direct inspection by means of a laryngoscope gives additional information. In a simple cyst or even in a thyroglossal cyst, incision of the cyst at the base of the tongue will give immediate, though temporary, relief. Excision of the cyst through the mouth is preferable, and gives more lasting and permanent results. Cystic hygroma, a form of lymphangioma, may be quite extensive in the pharynx and may involve the tongue as well, producing marked respiratory embarrassment and requiring tracheotomy. Dermoid cyst is an occasional lesion in this location. Malignant tumors, chiefly of the lymphoma group, occur both in the tonsil and in the lymphoid tissue of the retropharyngeal space.

LARYNGEAL OBSTRUCTION

A weak cry or none at all in an infant at birth suggests a laryngeal abnormality even though the respirations are normal. In an infant with dyspnea, stridor or cyanosis, the character of the cry is of great diagnostic importance, for in lower congenital respiratory lesions the cry is relatively normal, although it does not have its usual volume. A muffled pharyngeal quality in the cry, quite different from that due to laryngeal obstruction, suggests a pharyngeal obstruction or a thyroglossal cyst. A weak cry with dyspnea and indrawing may be due to a laryngeal web, and loud crowing sounds on inspiration are associated with congenital laryngeal stridor, bilateral paralysis, laryngomalacia and vascular anomalies compressing the trachea. Respiratory obstruction due to a laryngeal lesion presents characteristic symptoms. There is rapid, labored breathing, with indrawing in the suprasternal notch, epigastrium, intercostal spaces and supraclavicular fossae. The child makes a tremendous effort to get air into his lungs, using all of his accessory respiratory muscles in achieving this objective. The child has a marked pallor, and when cyanosis occurs, it is a late symptom and one which should be a warning that asphyxia and

death are imminent unless the condition is relieved promptly. These children are unable to take more than one swallow of food or fluid at a time, for any interruption in the conscious respiratory effort causes more embarrassment. Young babies assume a characteristic position with the head low and the buttocks elevated to improve breathing. Restlessness is pronounced and the child cannot sleep, for as soon as he dozes off into unconsciousness, he awakens almost immediately in order to resume conscious breathing activity. The patient appears quite apprehensive and has an ashen-gray appearance due to his marked air hunger. In addition, there is a marked wheezing sound and stridor which can be heard before one enters the room, as air goes through the narrowed larynx. It is more difficult for the youngster to get air into his lungs than it is for him to expire it, so that the crowing sound is heard on inspiration only.

Direct laryngoscopy is performed without anesthesia, and if no abnormality is found, bronchoscopy is undertaken as a means of inspecting the tracheobronchial tree. Although direct laryngoscopy is needed primarily to establish a diagnosis, one should be prepared for removal or aspiration of an obstructing cyst or for incision of a web, should this be needed. The larynx—particularly the subglottic area just below the vocal cords—is the narrowest point of the airway, and an obstruction in this area has more serious consequences than have those that are located elsewhere. The commonest causes of lesions affecting the larnyx are acute laryngotracheitis, congenital laryngeal stridor (laryngomalacia), congenital webs, cysts, atresia and subglottic stenosis.

Congenital laryngeal stridor is not a specific disease, but rather is a description of the nature of the symptom, its cause and location. The softness of some of the laryngeal cartilaginous structure in the infant—especially the epiglottis and arytenoids—does not provide the rigid framework that is needed in preventing encroachment upon the airway. Noisy respiration is heard only on inspiration, it usually has been present from birth, and it may be either constant or intermittent. The croupy sound is louder when the infant is lying on his back, and is less noticeable when he is on his abdomen. Other signs of air hunger are present in extreme cases. On direct laryngoscopy, the laryngeal airway together with the epiglottis and arytenoids can be observed directly on crying and deep inspiration. The epiglottis is flaccid and produces a fluttering sound on breathing, for it is drawn into the upper aperture of the larynx. The epiglottis is infantile or even "u"-shaped, and frequently looks like an exaggerated Greek letter omega. Because of its relatively small size and redundancy in extreme cases, on inspiration it is sucked not only over the upper laryngeal aperture but actually into the laryngeal airway itself. When the arytenoids are elongated and flaccid, these too may be sucked inward on respiration, but they usually do not cause as much respiratory obstruction as does the epiglottis. The condition is one which usually improves with age, and improved nutrition provides more stability both to the epiglottis and the other laryngeal structures. Only rarely is a tracheotomy needed, and it should be avoided if possible because of the difficulty one encounters in extubating these young individuals. Some youngsters with congenital laryngeal stridor also have pectus excavatum (funnel breast).

Congenital webs produce respiratory obstruction dependent upon the amount of narrowing. Usually, the web occurs anteriorly at the vocal cord level and involves the entire membranous vocal cord, leaving only a chink posteriorly for respiration. At times, fusion occurs above the vocal cords, and involves the ventricular bands, at which time it is considered supraglottic. Holinger[1] has reported cases in which not only were the anterior halves of the vocal cords fused, but the webbing extended subglottically as well. The diagnosis is made by direct laryngoscopy, and if the web is thin and is located between the anterior thirds of the vocal cords, it can be slit with a laryngeal knife. If the web is more fully developed and thicker, it may be necessary to follow the incision of the web by dilatations. Treatment should be as conservative as possible, and it is best to avoid tracheotomy, but at times dilatations must be carried out with a tracheotomy tube in place because of the marked reaction which occurs in some youngsters after mechanical trauma.

Congenital atresia of the larynx is rare, and the diagnosis is generally made at postmortem examination, for death occurs early unless there is a lower connection between the trachea and the esophagus, such as a tracheal or bronchoesophageal fistula, so that air can enter the lungs through the lower fistula. Conversely, caution should be exercised before one closes off a bronchoesophageal fistula to make sure that the laryngeal airway is adequate.

In paralysis of the larynx in the newborn, particularly bilateral paralysis associated with massive cerebral hemorrhage, death ensues soon after birth unless the condition has been recognized and an airway established. The simplest method is to expose the larynx and to introduce either a bronchoscope or an endotracheal tube into the trachea, through which oxygen can be administered. An airway is rapidly established, and if necessary it can be maintained by tracheotomy.

Congenital cysts of the larynx usually arise from the ventricle. As a rule, the secretion is rather thin, and often a simple incision of the cyst will allow evacuation of the fluid and immediately restore the airway. When filled with thick mucus, a cyst cannot be evacuated easily by means of an incision. Endoscopic removal with forceps has been employed in emptying well established, thick walled cysts, and dilatations are frequently

necessary afterward. If the obstruction is marked and much manipulation within the larynx is anticipated, it is well to perform a tracheotomy prior to the procedure so as to insure a permanently adequate airway for the initial examination and for any subsequent treatment.

Chronic subglottic stenosis is one of the most serious laryngeal obstructions, for the rigid cricoid cartilage, which forms the only complete ring in the laryngotracheal structure, does not allow expansion, and in this narrowest portion of the airway, inflammation or obstruction cannot be compensated for by other means. The children with this difficulty usually have stridor and croupy respirations with repeated superimposed respiratory infections. Mild stenoses usually improve with growth, and when marked, dilatation is beneficial. When dilatation is anticipated, tracheotomy usually should precede manipulation, for the edema after dilatation may produce severe respiratory embarrassment. The least manipulation may precipitate tracheotomy and cause the already thickened and inflamed subglottic structures to restrict the lumen further.

A condition which is seen relatively frequently in older children and which causes marked respiratory obstruction to develop suddenly and rampantly is acute epiglottitis, with or without abscess formation. The onset is abrupt, with a sore throat, high fever and increasing difficulty in swallowing. In a period of four or five hours, the difficulty in swallowing becomes quite marked, and respiratory inadequacy begins. Within a period of several hours, the respiratory obstruction may become so marked that air hunger occurs, together with stridor, labored breathing and other signs of laryngeal obstruction, and immediate relief is necessary. The diagnosis may be missed if the pharynx alone is inspected, for it exhibits only moderate to slight reddening. Examination with a direct laryngoscope reveals a large, swollen, edematous epiglottis, practically obscuring any view of the interior of the larynx. Often, tracheotomy is essential as an immediate and emergency measure. Although appropriate antibiotic therapy decreases the inflammation and swelling, actual necrosis and abscess formation commonly follow. Generally, the organism responsible for epiglottic abscess is the staphylococcus, and it may prove resistant to antibiotic therapy. An acute edema or suppuration of the epiglottis must be differentiated from diphtheria, and even though the latter is rare at the present time, appropriate cultures are needed.

Tumors occurring in the larynx and commonly causing obstruction are papilloma and hemangioma. The etiology of papilloma is not understood, but a viral basis is considered most likely. Papilloma in children are usually multiple, but they manifest their first symptoms during the early years of life as hoarseness and an ensuing respiratory difficulty. They may begin in one portion of the larynx and spread to other portions down the trachea, at times extruding around the tracheotomy opening and even into the main bronchi. When these latter conditions develop, the prognosis is poor, and no satisfactory way of preventing this spread has been discovered. Some investigators feel that implantation is a factor, and others discount that theory, feeling that the complications are further evidence of the viral etiology. The only encouraging trait of papilloma in children is that regression commonly occurs in adolescence, and indeed complete disappearance in some cases. However, Walsh and Beamer[3] reported two cases of papilloma in children which assumed malignant characteristics at the time of puberty, and this possibility, although remote, must be borne in mind. When papilloma are obstructive, as generally is the case, periodic removal by direct laryngoscopy must be performed, even though regrowth is almost a certainty. Granted that surgical removal is not a specific form of therapy, it is the best means of treatment at the present time. Various drugs, the latest of which is cortisone, have been used both locally and systemically, but little beneficial effect has been noted. When papilloma produce severe respiratory obstruction, tracheotomy is needed. Caution is a prime consideration in the surgical removal of papilloma as they recur. Too vigorous removal with marked denuding of tissue and large raw areas results in web formation on healing. Once webbing develops, the treatment is extremely difficult, and subsequent appearance of papilloma both on the web and in other regions of the larynx is not prevented. When the disease is extensive, it is better to remove the papilloma from one side at a time rather than to attempt removal from both vocal cords and ventricular bands simultaneously.

Congenital hemangiomas affect not only the pharynx but also the the larynx, and when the latter is involved, respiratory obstruction often is the chief symptom. Respiratory obstruction is usually transient and intermittent. Whereas the child may breathe well at times, at other times there is definite respiratory difficulty. It is not easy to diagnose hemangiomas by direct laryngoscopy when the characteristic color change is not visible. Commonly, they are associated with hemangiomas elsewhere, usually in the pharynx. As the child grows, the hemangioma may improve or disappear. It is unwise to administer irradiation therapy to an immature larynx because of the danger of impeding growth and causing permanent changes in the laryngeal cartilages, with resulting laryngeal stenosis.

When a foreign body has been aspirated into the larynx, the history is usually suggestive. The voice becomes hoarse, and respiratory obstruction varies with the degree of impairment of laryngeal function. Safety pins, for instance, cause little respira-

tory obstruction but affect the voice. Conversely, burrs and other sharp-pointed objects produce considerable respiratory obstruction. Opaque foreign bodies are visible on the roentgenogram, but non-opaque bodies have to be diagnosed and removed by direct laryngoscopy. A large foreign body in the hypopharynx or cervical esophagus can cause respiratory obstruction by pressure on the posterior wall of the trachea, since the posterior wall is membranous, and an obstruction from beneath produces narrowing of the airway. The finding of subglottic or tracheal narrowing in a youngster requires investigation of the esophagus, for non-opaque buttons and whistles in the esophagus have been responsible for respiratory obstruction.

TRACHEOBRONCHIAL OBSTRUCTION

Obstruction in the tracheobronchial tree produces some of the same symptoms as those of higher obstruction, but the cry is clear and unimpaired. When unilateral obstructive emphysema or atelectasis is found on the roentenogram of a child, bronchoscopy is needed. An obstructing bronchial plug or pulmonary agenesis gives the same physical findings, but must be differentiated by bronchoscopy. Obstruction due to excessive secretion indicates a pharyngeal paralysis or a congenital esophageal anomaly such as stenosis or atresia with or without fistula, when the excessive secretion is not relieved by several tracheal aspirations. Tracheal and bronchial webs are rare, but when they do occur dilatation is required. When there is external tracheal or bronchial compression on bronchoscopic examination, thoracic surgical exploration is necessary not only to establish the diagnosis but also to remove the obstructing lesion.

The common anomalies of the trachea are stenosis and web formation. There may be an absence of one or more tracheal cartilaginous rings, producing compression stenosis. Heavy cartilaginous overgrowth or other deformities of the cricoid cartilage or the first tracheal ring are typical sites of anomalous cartilage enlargement.

The diagnosis of atresia with or without fistula formation must be made within the first 24 to 36 hours after birth to insure life to the patient. The symptoms are characteristic, for aspiration into the tracheobronchial tree occurs with each feeding. Feeding problems in newborns should be considered due to congenital anomalies until this possibility has been eliminated. As the child takes fluid, there are choking, coughing and cyanotic spells with every attempt at feeding, but generally the cry is unaffected. During quiescent periods between feedings, symptoms are lacking, but unexplained pneumonitis in a newborn may be due to an atresia with or without fistula. These children give varying histories of swallowing difficulty and cyanosis. There also may be attacks of coughing with severe cyanosis for no obvious reason. At times of acute respiratory infection, the symptoms become more marked. A tentative diagnosis can be made on the lateral roentgen film of the neck and chest, and it can be confirmed by bronchoscopy. A catheter is introduced through the larynx into the trachea, and a small amount of iodized oil is instilled if there is any question of the accuracy of the diagnosis. As soon as the diagnosis has been made, prompt surgical intervention with closure of the fistula is indicated. The child's chances of survival increase proportionately with the speed of diagnosis and the early correction of the defect.

Although cardiovascular anomalies produce respiratory obstruction, they often are not manifested immediately after birth, but are noticed sometime later. The principal cardiovascular anomalies are double aortic arch, patent ductus arteriosus and anomalous right subclavian artery. A swallowing function with iodized oil or thin barium is an aid in the diagnosis in that it delineates the narrowing. Lateral films of the chest help in outlining the tracheal air column. Although bronchoscopy often demonstrates tracheal narrowing, the etiology cannot be determined by this means.

Agenesis of the lung is not incompatible with life, and the patient may live his normal life span, provided respiratory infections are promptly controlled, but patients with one lung do not tolerate infections well, and bronchopulmonary complications are serious for them. If such individuals can survive the first five years of life, they have an excellent change of reaching maturity and living to old age. Many cases of agenesis of the lung have other associated congenital defects, ones which may be more severe than the failure of the development of the lung. Pulmonary agenesis can be divided into (1) total absence of the lung, (2) rudimentary bronchus without lung tissue and (3) bronchus with vestigial lung buds.[2] The symptoms consist of difficulty in breathing, cough and wheeze. Labored and wheezing respirations after birth suggest the possibility of a congenital anomaly, and agenesis of the lung may be responsible for these symptoms. Cyanosis is infrequent unless complications are present. On physical examination, the respiratory movements of the thorax may not be appreciably altered. Flattening of the affected hemithorax is the most frequently observed abnormality. Dullness on percussion, an absence of breath sounds and displacement of the heart, trachea and mediastinum to the affected side are other findings. The diagnosis is made by roentgenographic, bronchographic and bronchoscopic examinations, but angiocardiography commonly is necessary to rule out other anomalies of the cardiac and respiratory systems. No aerated lung is visible on the affected side on the roentgenogram, and the normal lung protrudes across the midline. Narrowing of the intercostal spaces, flat-

tening of the costal contour and an elevated diaphragm are usually noted on the side of the lesion. Bronchoscopy and bronchography reveal displacement of the trachea and the presence of a main bronchial bud or complete absence of a main bronchus with no tracheal bifurcation. Recognition of the condition, and avoidance or control of severe respiratory infections, constitute the only treatment.

Lobar or unilateral atelectasis of the newborn may be produced by a mucous plug, and bronchoscopic aspiration is curative. In atelectasis from excessive mucus, determination of the cause should not be neglected, for the condition is often due to some underlying basic deficiency, rather than to an inability to get rid of normal mucus. It is rare to find a newborn with atelectasis from obstructing mucus alone which cannot be relieved by conservative methods, and bronchoscopic aspiration is rarely needed. When bronchoscopic aspiration becomes necessary, there commonly is some other basic, underlying medical difficulty that requires more active treatment. Mucoviscidosis should always be considered, as well as a congenital atresia or tracheoesophageal or bronchoesophageal fistula.

Obstructive emphysema results from the trapping of air behind an obstructing lesion such as a foreign body or a tumor. The ball-valve action allows air to enter the lung but prevents its expulsion. The ballooning of the lung segment presents a characteristic appearance on the roentgenogram. Obstructive emphysema means partial bronchial obstruction, and to determine its exact nature one must frequently employ endoscopic examination and instill radiopaque material. Congenital cystic disease of the lungs may be confused with obstructive emphysema, but in the former there is usually a more diffuse retention of air, and although septa may be discernible on the plain roentgen film, the bronchogram clinches the diagnosis.

In children, primary tuberculosis may attack the lymph nodes and produce a subsequent compression stenosis of the trachea or bronchus. Rarely does a lymph node erode into the bronchial lumen, but occasionally actual ulceration and even caseation may be discernible. More often, lymph node tuberculosis produces narrowing with an intact mucous membrane and no visible ulceration on endoscopic examination. If a lymph node becomes calcified, it may project into the lumen for varying distances and even form a broncholith. Some broncholiths are expectorated spontaneously, but others function as nuclei for obstructing phenomena that must be removed by bronchoscopy if the distal lung is to be allowed to expand. When ulceration is present, aspiration of the tracheobronchial secretion may lead to the finding of tubercle bacilli. One might not be able to do so otherwise, due to the youngster's habit of swallowing rather than expectorating coughed-up sputum. A frequent location for bronchial stenosis due to tuberculous adenitis is the middle-lobe bronchus, for here there is a prominent lymph node which, when enlarged, compresses the anterior wall, giving rise to the middle-lobe syndrome.

Bronchiolitis is manifested by swollen and inflamed mucosa with an excess of mucoid secretion. Although tracheotomy may be required in epiglottitis and laryngo-tracheo-bronchitis, it is useless and probably dangerous in bronchiolitis. The infection is generalized, and trauma from a tube or aspiration with a catheter increases the amount

TABLE 1

RESPIRATORY OBSTRUCTION IN INFANTS AND NEWBORNS

	Congenital Anomalies	*Inflammations*	*Tumors*	*Others*
Nasopharyngeal and Pharyngeal	Choanol atresia	Retropharyngeal abscess Hypertrophied adenoids	Cysts Dermoid Cystic hygroma Lingual thyroid Lymphomas	
Laryngeal	Stridor (laryngomalacia) Webs Cysts Subglottic stenosis	Croup Acute epiglottitis Abscess Diphtheria	Papilloma Hemangioma	Foreign body Paralysis, bilateral
Tracheobronchial	Atresia (with or without fistula) Agenesis of lung Vascular anomalies Mucoviscidosis	Atelectasis Obstruction emphysema Tuberculous adenitis Mucous plugs	Adenoma Papilloma Sarcoma	Foreign body

of edema, swelling and bleeding. Epiglottitis and laryngotracheitis frequently are of bacterial etiology and respond to antibiotic therapy, but the probable cause of bronchiolitis is viral, and there is no specific treatment. In bronchiolitis, the cry is clear and without stridor, and these qualities help in differentiating this condition from acute laryngo-tracheo-bronchitis and infections of the larynx.

Tumors of the tracheobronchial tree in children usually consist of sarcoma, papilloma and adenoma. Fortunately sarcoma is rare, for the prognosis is universally hopeless. The treatment consists of excision, when possible, along with the involved portion of lung. Papilloma occur more frequently in the larynx, which may involve the trachea and bronchi by direct extension, by implantation or as separate entities in any portion of the tracheobronchial tree. Adenomas may begin in childhood, but generally they are recognized later in life, and either are of the cylindromatous type or are adenocarcinoma. They have a relatively low-grade malignancy, and they generally present into the bronchus as small, reddish, friable hemorrhagic lesions, but extend extrabronchially for a great distance. They have been described as an iceberg type of of lesion in which only the small superficial top is observed, the base being widespread beyond the bronchial lumen. A bleeding tendency is characteristic, and in any patient—particularly in the younger age group—with persistent bleeding, bronchial adenoma should be considered as a diagnostic possibility, along with tuberculosis or bronchiectasis. The diagnosis is established by bronchoscopy when the obstructing lesion can be visualized in the larger bronchi and tissue can be removed for histologic study. Although some cases have been cured by endoscopic removal and electrocoagulation, thoracotomy is usually necessary for the removal of the entire lesion including that portion which cannot be visualized endoscopically.

Foreign bodies in the tracheobronchial tree produce an audible wheeze, yet the cry is normal. There is generally a history of aspiration in which there was an episode of choking, coughing and cyanosis. Following this, a symptomless period usually intervenes, but after a few days one again notes fever, cough and wheezing. Examination of the chest, both physically and roentgenologically, reveals either an obstructive emphysema or atelectasis. In obstructive emphysema due to a non-opaque foreign body, it is necessary to secure roentgen films both at the end of inspiration and of expiration for comparison to demonstrate air trapping. If the foreign body is radiopaque, it can easily be seen on the plain roentgenogram.

SUMMARY

Difficulty in breathing in the newborn may be due to an abnormality either of the central nervous system, the cardiovascular system or the respiratory system. When it has been ascertained that the respiratory system is responsible, the lesion is located in one of three general areas: (1) the nasopharynx and the pharynx, (2) the larynx and (3) the tracheobronchial tree. In differentiating the site of the lesion, the character of the cry affords one a definite diagnostic lead, for in pharyngeal obstruction the cry has a muffled quality; in laryngeal obstruction it is weak, with a crowing, stridorous sound; but in obstruction of the tracheobronchial tree, it is clear and unimpaired.

In high obstructions of the nasopharynx and pharynx, the infants present feeding problems, and the diagnosis depends upon direct inspection, palpation and determining the patency of the nasal passages by introducing a small catheter or probe.

In laryngeal obstruction, there is definite air hunger, rapid and labored breathing, and indrawing of the soft tissues of the thorax, together with marked pallor and an elevated pulse rate. Along with the marked wheezing and stridor, restlessness is common, and the patient is unable to sleep because of the necessity for his using the accessory respiratory muscles to continue breathing. Direct laryngoscopy is needed to confirm suspected laryngeal obstruction and to find out the exact nature and position of the obstructing lesion.

Obstruction of the tracheobronchial tree may be manifested by feeding problems in the newborn when atresia or cardiovascular anomalies are present, and as the child takes fluid, there are choking, coughing and cyanotic spells. A tentative diagnosis can be made both on the lateral roentgen film of the neck and chest, and a test of swallowing function along with a bronchoscopic examination, sometimes aided by the introduction of iodized oil into the tracheobronchial tree. Bronchoscopy is often needed as a means of confirming the diagnosis and localizing the site of the obstruction. Unilateral obstructive emphysema or atelectasis means partial or complete bronchial obstruction, and bronchoscopy is essential in the diagnosis. Determination of the cause of respiratory obstruction in newborns and infants requires the combined efforts of various medical specialties, and a team consisting of a pediatrician, a roentgenologist, a bronchologist and a thoracic surgeon generally secures the best results.

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Accidents in Children

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THE FACT THAT over 12,000 children die of accidents yearly may not startle the average physician who has become accustomed to reading and hearing unending series of figures daily on everything from the stock market to the individual records of major league baseball players. But the realization that accidents are *the leading cause of death* in children should awaken each of us from the state of self-satisfaction we have derived from our recently acquired ability to cope with previously unconquerable diseases. The advance of accidental death to this unenviable position stems largely from the decrease in mortality from disease, coupled with an increase in the number of environmental hazards that surround the child.[1] An equally astounding fact is that for every fatal accident that occurs among children, an estimated 150 children are accidentally injured in the United States.[2] These injuries and deaths are largely preventable!

At birth the child starts his struggle with the environmental hazards that surround him and that may do him bodily harm. In his crib, he may suffocate if the plastic mattress cover adheres to his face. He may fall from the bathinet while his mother is answering the doorbell or the phone. He may die of burns in a fire that consumes his home. Or he may die of injuries if he chances to be a passenger in one of the cars involved in a highway accident. The infant is at the mercy of his environment, and the carelessness of his parents may account for the loss of his life.

If he survives the first year of life, the child spends his next three years investigating those things which may harm him. The water which he learned to love in his infant bath may now kill him by drowning or inflicting him with scalding burns. Or he may die from burns from the pretty fire in the open fireplace which he had so admired from his jump-seat. His curiosity in following his mother down the basement stairs to see what she does down there may result in a fatal fall. The candy aspirin tablets that he was given when he was sick now are an agent of death if the bottle has been carelessly left within reach and if he consumes the entire contents. Thus the toddler, with his recently acquired mobility and curiosity, contributes to the hazards that surround him. Rather than being thrown out of an automobile, he is just as likely to be injured or killed by walking into the path of an oncoming car.

After the child has started to school, his world becomes much larger. The frequency of home accidents decreases at this time, and the incidences of poisonings and mechanical suffocation become practically nil. The number of school-age children who die from burns and falls is also significantly less. Instead, the youngster is more likely to die of drowning while wading or swimming, or by accidental death from firearms. Motor vehicle accidents claim approximately the same number of children in this group, but bicycle-automobile accidents kill more of these slightly older youngsters. For the boys, non-fatal injuries are less likely to occur at home than on the playground or on the way to and from school. Lacerations and contusions account for over one-half of these injuries; burns and orthopedic injuries account for most of the remainder.[2] Home injuries occur primarily in the female rather than in the male.[3] These facts reflect the school-age child's diversification of interests in relation to his sex, the larger amount of time that he now spends outside of his home environment, and his ability to profit from his pre-school experiences with the hazards that are present in the home.

ADULTS MUST BOTH GUARD CHILDREN AND TRAIN THEM

In spite of the fact that accidents are preventable, they are not easy to prevent. The infant under one year of age is almost completely reliant upon his parents to protect him against harm. He should be strapped to bathinets and into his high-chair; he should not be left alone where he might fall or drown; plastic bags, aspirin tablets and other objects which might cause suffocation or poisoning should be kept out of his reach; he should be protected from fires, electrical applicances and other potential sources of burns. The infant's survival depends upon the care and common sense exercised by his parents in preventing the mishaps that might claim his life.

The toddler is also dependent upon his parents for protection, but he has become amenable to education and discipline. It is possible to move the electric fan out of his reach, but neither the electric cord nor the outlet can be kept beyond the reach of his exploring hands. He must therefore be taught that such things are dangerous, and must be disciplined to stay away from them. If too many objects around the house are "off limits" for the child, he soon becomes frustrated, for he has no

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place in which to enjoy freedom of action. It is better for him to have his activity limited to one room in which there are no dangerous objects than for him to be given the run of the house and made to learn the dangers of each of the multitude of things that adults treat with respect. As he grows older and learns that the light cord might "bite" him, he still may fall down an unprotected stairwell or out through an open window. As the child grows older, education and discipline begin to show results, but protection must still be afforded him.[4]

By the time the child reaches school age, the pattern of safe behavior has been basically determined by his parents.[5] As he breaks away from the home environment and enters more into adult society, he receives less and less protection. Education in observing traffic laws, the rules of the playground and of the school, and various other regulations is begun in kindergarten. He begins to learn to obey rules set by people other than his parents and intended for his safety, and he tends to conform to some of the restrictions which society places upon him. He also learns that his newly found freedom from some of his parents' restraints and his increased range of activity carry more risk of injury. This self-education, associated with parental and academic guidance, eventually prepares him to protect *his* children and educate *them* for their struggle with the hazards present in their environment.

PARENTS KNOW WHAT THEY MUST DO, BUT AREN'T DOING IT

It is essential that we understand this philosophy of accidental injuries in children, but from the practical standpoint, what can we do about them? Let us first consider the role of the parents in accident prevention. During the first year of life, parents are the sole protectors of the infant's well being, but during the ensuing four years they assume the duties of teacher and disciplinarian as well as of protector. Their success or failure will depend upon their awareness of the problem and their ability to cope with it. Parents are becoming more and more accident-conscious as a result of news stories and warnings brought to their attention by popular magazines, newspapers and family physicians. Their failures seem traceable to their inability to educate and discipline the pre-school child. Many parents are reluctant to put a gate across a door to confine a child to one room for his own safety. "He won't stay in," they weakly exclaim. The same parent refuses to paddle the seat of the child who insists on wandering into the street even though it may mean the difference between life and death. Such a child will learn the difference between safety and danger only as a result of firmness, persistence and consistency on the part of the parents. As the pre-school child has been taught, thus will the school-age child act!

DOCTORS MUST ASSIST IN PREVENTING ACCIDENTS

It is our duty, as practicing physicians, to call these facts to parents' attention. We can do this in our offices during routine examinations. We can do it while suturing a minor laceration. House calls provide excellent opportunities for instructing parents in this regard, since the obvious hazards around a house can be pointed out one by one and on the spot. The Academy of Pediatrics has published single-sheet reminders, and they are available to physicians at a nominal cost for distribution to patients. They point out the necessity for accident prevention in the different age groups. Parents will follow such specific instructions on safety just as they will follow instructions on the administration of drugs, provided that the doctor *gives* them those instructions.

Other areas of parent education on child safety are the schools, the churches and civic clubs. The voluntary participation of the physician in speaking to these groups can contribute immeasurably to a decline in accidents in children. It is better to work through groups already organized than to attempt organizing new groups with the specific purpose of promoting child safety. Kiwanis, the Lions Club, Sertoma and numerous other organizations welcome opportunities to participate in such programs for community welfare. If the physician can get the ball rolling, the citizens of the community will keep it going.[1]

DOCTORS MUST TAKE TIME TO STUDY THE SUBJECT

Besides educating the public in this matter of child safety, the physicians must also educate themselves. The increasing importance of accidents as killers of children must be impressed upon practitioners through medical journals and medical society meetings. But even further, the medical profession needs information concerning the causes of accidents and the circumstances surrounding them. As we compile more knowledge of these things, we shall be better able to improve our means of prevention. The first step in this direction was taken by the American Academy of Pediatrics in 1950, when it established its Committee for Accident Prevention. As a result of the work of that Committee, safety standards have been adopted by industries manufacturing flammable clothing and household paints. Dr. Edward Press was instrumental in the Committee's publishing ACCIDENTAL POISONING IN CHILDHOOD, a handbook for the physician.[6] The Committee also established poison control centers, 193 of which were available in 43 states and territories as of October 1, 1958.[7] Usually the center is located in or in conjunction with a local hospital, and functions as a source of information for physicians about poisonings, as well as a means of collecting information from physicians for research on poisonings.[8] Following the establishment of local poison control centers, a National Clearinghouse for Poison Con-

trol Centers was established in 1957 by the U. S. Public Health Service. The National Clearinghouse collects information on poisons and poisonings from journals, industry and poison control centers. This information is then tabulated, analyzed and disseminated to the local poison control centers. Another function of the National Clearinghouse is that of helping new poison control centers to start operation. The regional offices of U.S.P.H.S. assist with this work.[9, 10] The strides that have been taken in this field are an index of the progress that can be made in the future in the entire field of childhood accidents.

SUMMARY

The problem of accidents in childhood has been presented without the use of a mass of confusing statistics and graphs. Its solution will consist of accelerating and intensifying the growing child's ever-changing capacities for avoiding harm from the various dangerous elements in his environment. He can be helped by his parents, who should protect him, discipline him, educate him and set an example for him. He can also be helped by his doctor, who can help to eliminate environmental hazards, in cooperation with civic and medical organizations, and can constantly serve as an advisor to parents in this as well as in other health matters. Our successes in this field should be no less rewarding than have been our victories in the area of infectious diseases.

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ANNUAL SCIENTIFIC PROGRAM, SIOUX VALLEY MEDICAL ASSOCIATION

(Sponsored by the University of South Dakota School of Medicine) Sioux City

Tuesday, February 23, Methodist Hospital

9:00 a.m. MOVIE: "Diagnosis and Office Management of the Arthritides"
9:40 DISCUSSION: "The Tonsil Problem"—Drs. Worthy Boden and J. E. Reeder, Jr.
10:00 "The Immediate Care of the Hand Injury"—Dr. Earl Mumford
10:30 PANEL DISCUSSION: Diabetes Mellitus
"Fundamental Aspects"—L. C. Smith, Ph.D., associate professor of biochemistry, U. of South Dakota
"Pediatric Aspects"—Dr. James F. Boysen
"Obstetrical Aspects"—Dr. Leonard H. Boggs
"General Aspects"—Dr. Robert C. Larimer
1:30 p.m. "Chest Roentgenography in General Practice"—Dr. L. E. Collins
1:50 "Tranquilizers"—Dr. Philip F. H. Pugh
2:10 "The Ileal Bladder"—Dr. Dwayne Howard
2:20 SYMPOSIUM: Coronary Artery Disease
"Etiology: Latest Theories and Facts"—Edwin H. Shaw, Ph.D., Department of Biochemistry, U. of South Dakota
"Diagnostic Syndromes"—Dr. Donald J. Wagner
"Therapy and Prognosis"—Dr. E. D. Erickson
"Will Surgery Help?"—Dr. C. L. Beye

Evening Session, Sheraton-Martin Hotel

7:30 SMOKER—Hosts, members of Woodbury County Medical Society

Wednesday, February 24, Sheraton-Martin Hotel

8:55 a.m. MOVIE: "Emergency Surgery"
9:30 "Initial and Emergency Care of Acute Abdominal and Chest Injuries"—Dr. William E. Adams, professor of surgery, University of Chicago
10:10 "Practical Aspects of Pulmonary Function Studies"—Dr. George Bedell, assistant professor of medicine, S.U.I.
10:50 (Medicolegal discussion; speaker to be announced)
1:30 p.m. "Hearing Problems for General Practitioners"—Dr. Eugene Der Lackie, Northwestern University
2:10 "Primary Care of Multiple Injuries"—Dr. Adams
2:50 "Modern Concepts in the Treatment of Bronchitis, Emphysema and Bronchial Asthma"—Dr. Bedell
5:30 SOCIAL HOUR AND BANQUET

Tuesday, February 25, Sheraton-Martin Hotel

8:50 a.m. MOVIE: "Meconium Ileus"
9:30 "Clinical Aspects of Some Hormone-Secreting Tumors"—Capt. Roy E. Crowder, USN (MC), Melrose, Massachusetts
10:10 "Viral Infections in Children, I"—Dr. Henry Cramblett, Bowman-Gray School of Medicine
10:50 "Significance of Abnormal Uterine Bleeding During the Menopausal Period"—Dr. Charles P. McCartney, associate professor of obstetrics and gynecology, University of Chicago
1:30 p.m. "Changes During Forty Years of Obstetrics"—Capt. Crowder
2:10 "Viral Infections in Children, II"—Dr. Cramblett
2:50 "Current Management of Toxemias of Pregnancy"—Dr. McCartney

ABO Blood Group Incompatibility

CAPT. STANLEY N. GRAVEN, USAF (MC)

IOWA CITY

INCOMPATIBILITY involving the ABO blood groups is a much more common cause of jaundice and/or anemia in the neonatal period than is Rh incompatibility.[1] However, because ABO incompatibility tends to produce less severe hemolytic manfestations, it is less well known to clinicians. This paper will deal with the diagnosis and management of hemolytic disease due to ABO incompatibility, and in doing so it will review the immunology of the ABO blood group system and its relation to blood group incompatibility between mother and fetus.

The ABO system of blood grouping divides blood into four major types—A, B, AB and O—according to the antigenic substance in the red cell. Antibody is always present against the antigen that is *not* found in the cells (Table 1), and this is called natural antibody, since it appears in the blood without known previous antigenic stimulation.

TABLE 1

ANTIGENS AND ANTIBODIES OF THE ABO BLOOD GROUP SYSTEM ACCORDING TO BLOOD TYPE[2]

Blood Type	*Antigens*	*Antibodies*
A	A Substance	Anti B
B	B Substance	Anti A
O	None	Anti A & B
AB	A & B Substance	None

GROUP A AND B ANTIGENS AND ANTIBODIES IN FETUS AND INFANT

Blood group A and B substances can be detected in the fetus at about the sixth week of fetal life, and they gradually increase in antigenic potency throughout the remainder of fetal life. At the time of birth, the potency is approximately 20 per cent that of adults, and maximal potency occurs when the individual is approximately 20 years of age.[2] Though the A and B substances are usually thought of in terms of their presence in the red blood cells, they are also widely distributed throughout body tissues. Their concentrations in the stomach, salivary glands and kidneys far exceed their concentration in the red cells.[3]

The infant does not produce anti-A or anti-B antibodies before birth, but approximately 95 per cent of newborns have demonstrable titers of antibodies that have been passively transferred from their mothers. The infant starts to produce his own anti-A or anti-B antibodies at 10 to 14 days of age. The anti-A and/or anti-B titer gradually increases until a peak is reached at the time of puberty.[2]

IMMUNE ANTIBODIES

The introduction of group A substance by injection, transfusion or pregnancy into a type B or O person will result in the production of anti-A antibodies. (Similarly, the injection of group B substance into a type A or O person results in the production of anti-B antibodies.) The anti-A or anti-B antibodies formed in response to specific contact with group A or B substances are called immune antibodies. Immune antibodies have a number of subtle characteristics that differentiate them from the naturally occurring ones:[1]

1. Optimal reaction at 37°C instead of 4°C, as is the case with natural antibodies
2. Greater resistance to loss of potency by heating at 70°C
3. Conglutination (see glossary) in colloid media such as serum or gum acacia with higher titers than obtained by agglutinin action in saline media
4. A positive indirect Coombs (antiglobulin) test at dilutions well beyond the end point of titration in saline (see glossary)
5. Resistance to neutralization by soluble specific blood group A or B substances which will neutralize the saline agglutinins
6. Hemolysis and complement fixation *in vitro*.

Although most individuals with immune antibody titers have histories of transfusion with blood of an unsuitable major type, or pregnancy, a number have demonstrable immune titers in the absence of such history. The mechanism of the immune stimulation in these persons is unknown.

ANTIBODY TITERS IN PREGNANCIES WITHOUT SENSITIZATION

Depending upon the distribution of genes for A, B, AB and O in a given population, approximately 20 to 25 per cent of all pregnancies are heterospecific in the sense that fetal red cells possess a group A or B antigen not present in the mother, though the maternal serum contains the corresponding agglutinin (anti-A or anti-B antibody) which is antagonistic to the fetal blood

Dr. Graven completed a residency in pediatrics last June and is now doing a year of graduate work in immunology at the S.U.I. College of Medicine under a training program sponsored by the United States Air Force. The contents of this article are the personal views of the author, and are not to be construed as a statement of official Air Force policy.

group.[1] In the majority of cases, this involves a type O mother and a type A or B fetus.

Antibody Titers of Infants. Zuelzer and Kaplan[4] studied the cord blood from 100 normal heterospecific pregnancies (pregnancies with no evidence of hemolytic disease in the infant) in which the mother was type O and the fetus type A or B. The results are presented in Table 2.

TABLE 2

INCIDENCE OF ANTIBODIES FOUND IN CORD BLOODS IN HETEROSPECIFIC PREGNANCIES[4]

	47 O-A Pregnancies		*53 O-B Pregnancies*	
	ANTI A	ANTI B	ANTI A	ANTI B
Antibody present	4	44	52	0
No antibody present	43	3	1	53

From Table 2 it can be noted that 96 per cent of the infants of heterospecific pregnancies lack the homologous antibody (antibody against their own blood group), and 96 per cent have maternally transferred heterologous antibody. Homologous antibody, when present, is demonstrable only in undiluted serum or in gum acacia, a medium used to increase the sensitivity of the antibody determination. It is assumed, on the basis of these results, that transmission of homologous antibody to the fetus is similar to transmission of heterologous antibody. One can conclude that in the "normal" heterospecific pregnancy, the antibody is bound by the group-specific substance in the placenta and/or fetal tissues and thus does not reach the fetal red cells. There is considerable evidence to suggest that heterospecific pregnancy *per se* does not present a handicap to the infant.[5] Rosenfield[6] found hemoglobin concentration, reticulocyte count and bilirubin concentration of cord blood to be essentially the same in homospecific and heterospecific pregnancies (Table 3).

TABLE 3

AVERAGE RETICULOCYTE COUNTS AND CONCENTRATIONS OF HEMOGLOBIN AND BILIRUBIN IN CORD BLOOD IN HOMOSPECIFIC AND HETEROSPECIFIC PREGNANCIES

	No. of Cases	*Concentration of Hemoglobin Gm./100 ml.*	*Count of Reticulocytes %*	*Concentration of Bilirubin mg./100 ml.*
Homospecific	800	15.8	4.1	1.8
Heterospecific	330	15.7	4.3	1.9

It may therefore be concluded that in the usual heterospecific pregnancy there is no evidence for either increased production or increased destruction of red cells.

Antibody Titers of Mothers. Maternal anti-A and anti-B titers in both homospecific and heterospecific pregnancies have likewise been extensively investigated. The anti-A and anti-B titers of type O mothers at term and three weeks postpartum, presented in reference to the blood types of their babies, can be seen in Tables 4 and 5.

The average antibody titer and the range of

TABLE 4

ANTI-A SALINE ANTIBODY TITERS OF TYPE O MOTHERS WITH TYPE O AND TYPE A FETUSES AT TERM AND THREE WEEKS POST PARTUM[7]

	95 Cases With Type O Fetus		*52 Cases With Type A Fetus*	
TITER	TERM	3 WEEKS POST PARTUM	TERM	3 WEEKS POST PARTUM
1024				2
512				8
256	10	15	5	12
128	28	30	11	14
64	36	32	25	11
32	13	8	6	4
16	5	11	5	1
8	3			
4				

TABLE 5

ANTI-B SALINE ANTIBODY TITERS OF TYPE O MOTHERS WITH TYPE O AND TYPE B FETUSES AT TERM AND THREE WEEKS POST PARTUM[7]

	91 Cases With Type O Fetus		*59 Cases With Type B Fetus*	
TITER	TERM	3 WEEKS POST PARTUM	TERM	3 WEEKS POST PARTUM
1024				2
512				7
256	3	4	5	9
128	12	21	14	9
64	34	31	20	23
32	20	17	12	6
16	16	13	5	3
8	1	4	2	1
4	5	1		

antibody titers were the same for multiparous and primiparous patients. Likewise, as noted, there is no difference at term between the titers in homospecific and heterospecific pregnancies. In the heterospecific pregnancy, however, there is a significant, although often transient, rise in the homologous antibody titer postpartum. There have been no studies to determine what part of this increased antibody titer is made up of immune antibodies. The postpartum rise in homologous antibody titer in the heterospecific pregnancy has been found to be essentially limited to the pregnancies in which the infant can later be shown to secrete blood-group substances in his saliva. Such individuals are spoken of as secretors. Although it is known that fetal cells enter the maternal circulation during pregnancy and after delivery, the postpartum rise in antibody titer may not be due to the passage of fetal cells at all, but rather to the passage of blood-group substance from the placenta or other tissue fluids of the infant.

CLINICAL FINDINGS IN ABO ERYTHROBLASTOSIS

The nonsensitized infant of a heterospecific pregnancy who presents no physical or hematologic abnormalities is markedly different from the sensitized infant with hemolytic disease due to ABO incompatibility. Though the physical examination at birth is usually normal, the infant with ABO erythroblastosis usually has an onset of jaundice within the first 24 hours. Hepatosplenomegaly and other physical findings are usually absent. In contrast to Rh incompatibility, sensitization may occur with the first pregnancy. In over 99 per cent of the cases, it is found in type O mothers with type A or B infants.[1] Often, there is no history of sensitization of the mother. The disease may be mild with minimal hemolysis, but it may also be quite fulminating, with death occurring when the infant is between 18 and 36 hours of age if exchange transfusion is not performed. In its clinical course, ABO erythroblastosis may closely resemble that of the mildly to moderately sensitized infant with Rh incompatibility. Hydrops fetalis and stillbirth are exceedingly rare.[1]

LABORATORY EVIDENCE OF ABO ERYTHROBLASTOSIS

The infant with ABO hemolytic disease can be differentiated from the uninvolved infant of a heterospecific pregnancy by evidence of sensitization, increased red cell production and increased red cell destruction.

Evidence of Sensitization. Sensitization is indicated by the finding of the homologous antibody (anti-A in type A infants, and anti-B in type B infants) in the infant's serum. Homologous antibody titer capable of agglutinating adult red cells of the same blood group was demonstrated (Table 7) in the serums of 202 of 210 affected infants in Zuelzer's series.[1] Cells of an adult are used because the A and B substance in the fetal cells is so antigenically impotent that it will not bind the antibody. For this reason, the direct Coombs test is negative in most cases of ABO hemolytic disease. Zuelzer[1] reported a grossly positive direct Coombs test in only 6.1 per cent of 212 cases of hemolytic disease due to ABO incompatibility. If the Coombs test is strongly positive, other causes of hemolytic disease should be suspected.

The titers of homologous antibody in mothers of infants with ABO hemolytic disease (Table 6) tend to be somewhat higher than those found in heterospecific pregnancy without erythroblastosis (Tables 4 and 5), but there is considerable over-

TABLE 6

HOMOLOGOUS SALINE ANTIBODY TITERS OF TYPE O MOTHERS WITH TYPE A OR B INFANTS SHOWING EVIDENCE OF HEMOLYTIC DISEASE[8]

Titer	*Anti-A Titer With Type A Fetus*	*Anti-B Titer With Type B Fetus*
2048	1	
1024	2	
512	7	3
256	11	1
128	8	3
64	5	1
32	1	
16		1
	35	9

TABLE 7

PROCEDURE FOR DETERMINATION OF ANTI-A OR ANTI-B TITERS OF INFANT'S BLOOD

1. Make serial two-fold dilutions (1:1, 1:2, 1:4, etc.) of the infant's serum using 0.2 cc. of serum.
2. Prepare a 2 per cent suspension in normal saline of adult type A or B cells from pools of five or six different bloods of the same type.
3. Add two drops of the 2 per cent suspension to each tube and incubate in a water bath for 60 minutes at 37° C.
4. Remove the tube from the water bath and fill with fresh saline. Centrifuge heavily, and decant. Repeat this washing three times. Decant as completely as possible after the third washing.
5. Add two drops of anti-human globulin (Coombs) serum and mix well. Incubate at room temperature for 10 minutes.
6. Centrifuge for one minute at 500 to 1,000 r.p.m.
7. Read as the highest dilution of serum in which agglutination occurred. This is the anti-A or anti-B titer.

lapping of the ranges. For an individual titer to be significant, it should therefore be greater than 1:512. In nearly all of the mothers whose infants show evidence of hemolytic disease, a significant immune titer was present, as demonstrated by one of the several methods for the determination of immune titer listed herewith (Table 8). The presence and height of the titer of immune antibodies has a far better correlation with the degree of hemolytic disease than has the height of the titer of homologous saline antibody.

TABLE 8

PROCEDURE FOR IMMUNE ANTI-A AND/OR ANTI-B TITRATION

1. Mix one volume of the mother's serum with two volumes of solution containing blood group specific substances A and B (Witebsky substance). Mix well and incubate at room temperature for 10 to 20 minutes.
2. To two drops of this mixture, add two drops of a 2 per cent suspension in normal saline of adult type A or B cells. Incubate at room temperature for one hour and read for agglutination. Lack of agglutination indicated complete neutralization of the saline antibodies. Occasional sera will require additional group specific substance for complete neutralization.
3. If neutralization is complete, make serial two-fold dilutions (1:1, 1:2, 1:4, etc.) using 0.2 cc. of the mother's neutralized serum. To each tube add two drops of the 2 per cent suspension of the type A or B cells. Incubate in a 37° C. water bath for 60 mintues.
4. Remove the tubes from the water bath and fill with fresh normal saline. Centrifuge heavily, and decant. Repeat the washing three times. Decant as completely as possible after the third washing.
5. To each tube add two drops of anti-human globulin (Coombs) serum and mix well.
6. Centrifuge for one minute at 500 to 1,000 r.p.m.
7. Read the titer as the tube with the highest dilution of serum in which agglutination occurs. This is termed the immune titer.

Evidence of Increased Production of Red Cells. Increased red cell production is evidenced by spherocytosis (presence of spherocytes in a smear of peripheral blood), normoblastemia (over 4 per cent of the white count made up of nucleated red cells) and reticulocytosis (over 4 per cent reticulocytes). There is an overlapping upon the results found in normal infants, but the hematologic data as a group should indicate increased production of red cells.

Evidence of Increased Destruction of Red Cells. Increased destruction of red cells is evidenced by the rapid rise in concentration of bilirubin in the serum, with 90 to 95 per cent of the bilirubin in the indirect or unconjugated form. The increased concentration of bilirubin is associated with a concomitant fall in the concentration of hemoglobin in the hematocrit. The decrease in the concentration of hemoglobin may, however, be masked by hemoconcentration associated with poor fluid intake during the first 24 hours of life.

MANAGEMENT OF ABO ERYTHROBLASTOSIS

Infants with ABO incompatibility rarely show evidence of abnormality during the first 18 hours of life. When jaundice appears in the first 12 to 18 hours of life, however, prompt investigation is indicated.

Table 9 presents an outline for the studies indicated in the evaluation of a patient suspected of having hemolytic disease from ABO blood group incompatibility.

TABLE 9

BLANK FOR LABORATORY STUDIES FOR INVESTIGATION OF ABO INCOMPATIBILITY

MOTHER:	Blood Type	Rh
	Anti A Titer	
	Anti B Titer	
	Immune Titer	
INFANT:	Blood Type	Rh
	Anti A Titer	
	Anti B Titer	
	Direct Coombs	
	Hemoglobin	Hematocrit
	WBC	% Nuc. RBC's
	Reticulocyte Count	
	Smear for Spherocytes	
	Bilirubin: Direct	Indirect
COURSE:	Date	
	Time	
	Bilirubin	
	Hb.	

The diagnosis of ABO erythroblastosis is made by finding homologous anti-A or anti-B antibody in an infant with evidence of increased destruction of red cells. When the homologous antibody is demonstrable, an accelerated rate of red cell destruction will be noted, and some degree of anemia will be present by the age of 3 to 6 weeks. It is impossible, however, to predict the amount of hemolysis or, more importantly, the degree of hyperbilirubinemia on the basis of the homologous antibody titer present in the infant's blood at the time of birth. The results of sensitization of the infant with anti-A or anti-B antibodies may therefore vary from severe massive hemolysis requiring an exchange transfusion, to mild hemolysis resulting in mild anemia at 6 weeks of age.

If the bilirubin concentration is sufficiently elevated—i.e., over 20 mg./100 cc.—an exchange transfusion should be performed, the bilirubin concentration being the primary indication for exchange transfusion. Central nervous system dam-

age (kernicterus) can result from a sufficient degree of hyperbilirubinemia, regardless of the etiology.[9] The technic for an exchange transfusion is the same as that used for infants with Rh incompatibility.[9] Fresh (i.e., banked for less than three days) type O blood of the same Rh type as that of the infant should be used for the exchange transfusion. The blood should have low anti-A and anti-B titers, or the antibodies should have been neutralized with Witebsky substance (soluble A and B substances). The blood should be crossmatched with the mother's serum, for the antibodies responsible for the incompatibility are present in maximal concentration in the mother's serum. Although donor cells must be compatible with the mother's serum, it is not necessary for the donor plasma to be compatible with the mother's cells.

CASE REPORTS

The following cases are presented to illustrate the variability in the manifestations of ABO incompatibility resulting in hemolytic disease.

Case 1. An infant girl was the product of the fifth pregnancy of a 25-year-old mother who was known to be type O, Rh negative. In 1953, she had given birth to an 8 lb. male infant who became jaundiced on the fourth day of life and remained jaundiced until the seventh to tenth day of life. The boy is now living and well. In 1955, the mother had a spontaneous abortion after 2½ months' gestation, for which she received a blood transfusion without complication. In 1955, she bore a 6¼ lb. female infant after an apparently uneventful pregnancy, and the infant was given an exchange transfusion immediately after birth. No information is available concerning the laboratory findings or the indications for transfusion of the second baby. Jaundice and anemia were not reported, and the child is now living and well. In 1957, her third child, an 8 lb. male infant, became jaundiced on the third day of life. Jaundice persisted for 7 to 10 days. There was no anemia, and the child is now living and well.

Prenatal and Birth History. The pregnancy and the delivery were uncomplicated. There was no detectable maternal anti-Rh antibody present before delivery. The infant weighed 8 lbs. The physical examination at birth was within normal limits. In particular, no jaundice or splenomegaly were noted.

Laboratory Findings and Clinical Course. The infant was type A, Rh negative, and the direct Coombs test was negative. On her third day of life, she was noted to be moderately jaundiced. The concentration of direct-reacting bilirubin was 0.6 mg./100 cc., and the total concentration was 15.0 mg./100 cc. The concentration of hemoglobin was 15.9 Gm./100 cc., and the hematocrit was 51 per cent. A smear of the peripheral blood showed 4 per cent nucleated red blood cells and a few spherocytes. The anti-A titer in the infant's serum was 1:4. The concentration of bilirubin remained the same on the fourth day, and subsequently decreased. The infant took feedings without difficulty, and was discharged from the hospital on the sixth day of life.

The case illustrates the minimal involvement of a type A infant of a type O mother. The diagnosis was based on the presence of anti-A antibodies in the serum of the infant in a titer of 1:4. There was suggestive evidence for increased production of red blood cells in the peripheral smear, for it contained 4 per cent nucleated red cells and a few spherocytes. The concentration of bilirubin rose slowly, reaching a peak on the third or fourth day of life. The infant showed no physiologic alteration as a result of the hyperbilirubinemia. It would be anticipated that this child would require only supplemental iron to prevent the development of anemia.

Case 2. An infant boy was the product of the second pregnancy of a 31-year-old mother who was type O, Rh positive. Her first pregnancy had been uncomplicated, and there was no history of jaundice or anemia in her first child.

Prenatal and Birth History. Her present pregnancy and delivery had been uncomplicated. The child's physical examination at birth was within normal limits, and he weighed 7½ lbs.

Laboratory Findings and Clinical Course. Jaundice was noted at 20 hours of age. The infant was type B, Rh positive, and the direct Coombs test was negative. The total bilirubin concentration was 13.0 mg./100 cc., with 0.7 mg./100 cc. direct-reacting. The hematocrit was 52 per cent, and the reticulocyte count was 4.8 per cent. There were 35 nucleated red cells per 100 white cells. Numerous spherocytes were seen on the smear of peripheral blood. The anti-B (homologous antibody) titer was 1:8, and the anti-A titer was 1:4. The mother's anti-A and anti-B saline antibody titers were 1:128 and 1:512, respectively. The titer of immune anti-B antibodies was 1:32.

At 32 hours of age, the girl's total bilirubin concentration was 13.6 mg./100 cc. It reached a peak of 16.3 mg./100 cc. at 44 hours of age, and subsequently fell over the succeeding 3 to 5 days (Figure 1). By the fifth day, the anti-B titer was not detectable, but the anti-A titer persisted at a level of 1:4. The infant was discharged on the sixth day, with a hemoglobin concentration of 12.3 Gm./100 cc., a hematocrit of 43 per cent and a reticulocyte count of 2.8 per cent.

The infant was seen at 19 days of age, weighing 9 lbs. The physical examination at that time was within normal limits. The laboratory findings included a normal white blood count and differential, a hemoglobin concentration of 9.6 Gm./100 cc., and a hematocrit of 30 per cent. Further follow-up was not possible.

This case shows the results of moderate involvement of the type B infant of a type O mother. The anti-B (homologous antibody) titer in the infant's serum was 1:8. There was a markedly increased red cell production, as evidenced by the large numbers of nucleated red cells and the numerous spherocytes on the smear of peripheral blood. There was a more rapid rise in bilirubin concentration, with a peak on the second day. In view of the degree of hemolysis, it would appear that this child had an unusually mature liver function in controlling the bilirubin concentration. It should be noted that the repeat antibody studies on the fifth day showed a persistence of the heterologous anti-A antibody in a titer of 1:4, but the homologous anti-B antibody titer was undetectable. It is assumed that the anti-B antibodies were removed from the serum by the red cells. It is this binding of antibody on the surface of the red cells which makes them more susceptible to hemolysis. The infant was anemic at 3 weeks of age. It was anticipated that this infant would need supplemental transfusions to correct her anemia at 6 to 8 weeks of age.

Case 3. An infant girl was the product of the fourteenth pregnancy of a 40-year-old mother who was known to be type O, Rh positive. Of the previous pregnancies, all had been considered normal except the third, sixth, eleventh and thirteenth. The third pregnancy (1940) had resulted in a 9 lb. male who was "deeply jaundiced" for two or three weeks. The child, described as "clumsy and hard of hearing" was killed in an auto accident at age 9. The sixth pregnancy (1945) had resulted in the birth of a 4 lb. male who was moderately jaundiced at birth. This child is living and well, although slow in school. The eleventh pregnancy (1953) had ended in the birth of an 8 lb. male at University Hospitals. The infant was found dead in bed, mildly jaundiced, at 24 hours of age. Necropsy revealed evidence of marked extramedullary erythropoiesis "strongly suggestive of erythroblastosis." The twelfth pregnancy (1955) had been completely normal. The thirteenth pregnancy (1956) had resulted in a 9 lb. male determined to be type B, Rh positive. The infant was jaundiced within the first 24 hours, and subsequently required an exchange transfusion. The infant was retained in the hospital for four weeks because of a persistently elevated concentration of phosphorus and a decreased concentration of calcium in the serum, in spite of large calcium supplements.

Prenatal and Birth History. Because of the history of a previous infant with ABO hemolytic disease, antepartum maternal antibody studies were performed. The titers of anti-A and anti-B saline antibodies were 1:128 and 1:1024, respectively. The titers of anti-B immune antibodies were 1:32 and possibly 1:64. Labor and delivery were uncomplicated except for mild hypertension. When the infant was examined after birth, the inferior margin of his liver was felt 1½ cm. below the right costal margin. There was no evidence of jaundice or splenomegaly.

Laboratory Findings and Clinical Course. The infant was type B, Rh positive, and the direct Coombs test was negative. Concentrations of bilirubin, and hemoglobin and hematocrit of the cord blood were 3.8 mg./100 cc., 17.7 Gm./100 cc., and 57 per cent, respectively. At 8 hours of age, the infant's reticulocyte count was 7.7 per cent. There were 20 nucleated red cells per 100 white blood cells, and numerous spherocytes were seen

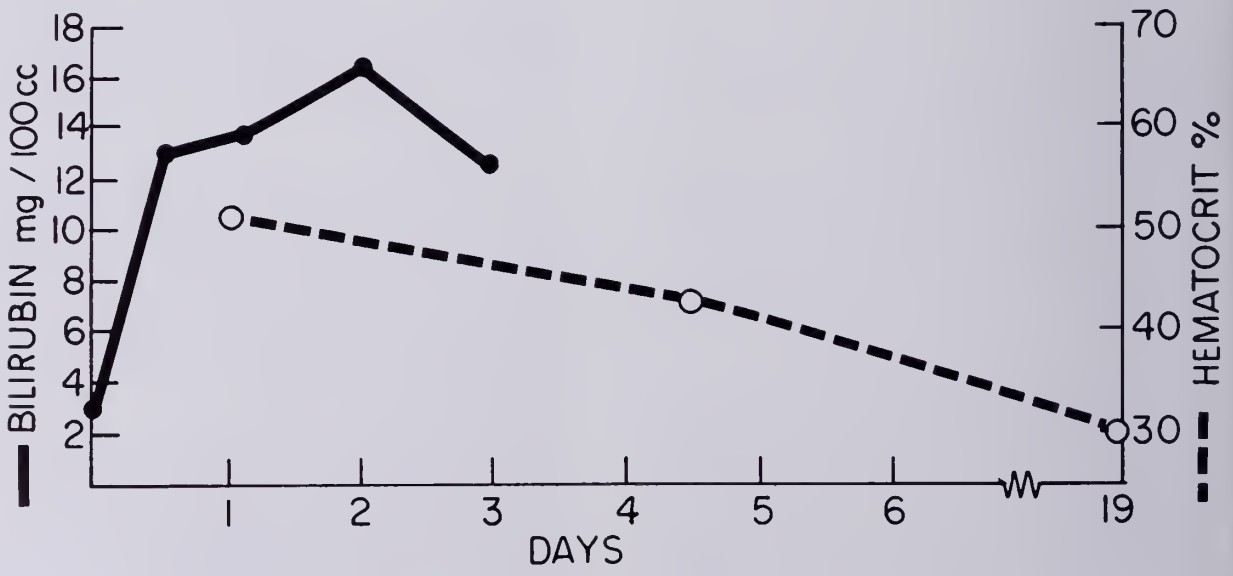


Figure 1. Hematocrit and Concentration of Bilirubin Dcterminations on Infant in Case 2.

on the smear of peripheral blood. The anti-B titer was 1:64. The course of the bilirubin and hemoglobin concentrations are shown in Figures 2 and 3. The concentration of bilirubin exceeded 20 mg. per cent by 48 hours of age, and consequently an exchange transfusion was performed. The infant tolerated the exchange transfusion well, and except for slow acceptance of formula, did well in the immediate post-exchange period. At 8 days of age, the infant refused and regurgitated feedings. Signs and symptoms of tetany were noted. The concentration of calcium in the serum was 5.8 mg./100 cc., and that of phosphorus was 10.4 mg./100 cc. The infant was given calcium gluconate intravenously, followed by calcium lactate orally. In spite of large doses of calcium, the concentrations of calcium and phosphorus in the serum did not return to normal until 28 days of age. A 100 cc. supplemental transfusion was given at 30 days of age because of the anemia (hemoglobin concentration 8.3 Gm./100 cc.). The infant was discharged at 34 days of age with a hemoglobin concentration of 10.3 Gm./100 cc.

The effect of severe sensitization is illustrated by this case. The homologous antibody titer was 1:64. Increased red cell production was present, as evidenced by the spherocytosis and the increased numbers of nucleated red cells. The rapid fall in the concentration of hemoglobin, associated with a rapid rise in the concentration of bilirubin, was evidence of the severe degree of hemolysis. The concentration of bilirubin was sufficiently elevated to require an exchange transfusion, but it decreased rapidly afterward. It is unusual for an infant with ABO erythroblastosis to require more than one exchange transfusion. The management of this case was greatly facilitated by the history of the mother's having had previous infants with ABO incompatibility. It would appear that this woman has had at least four

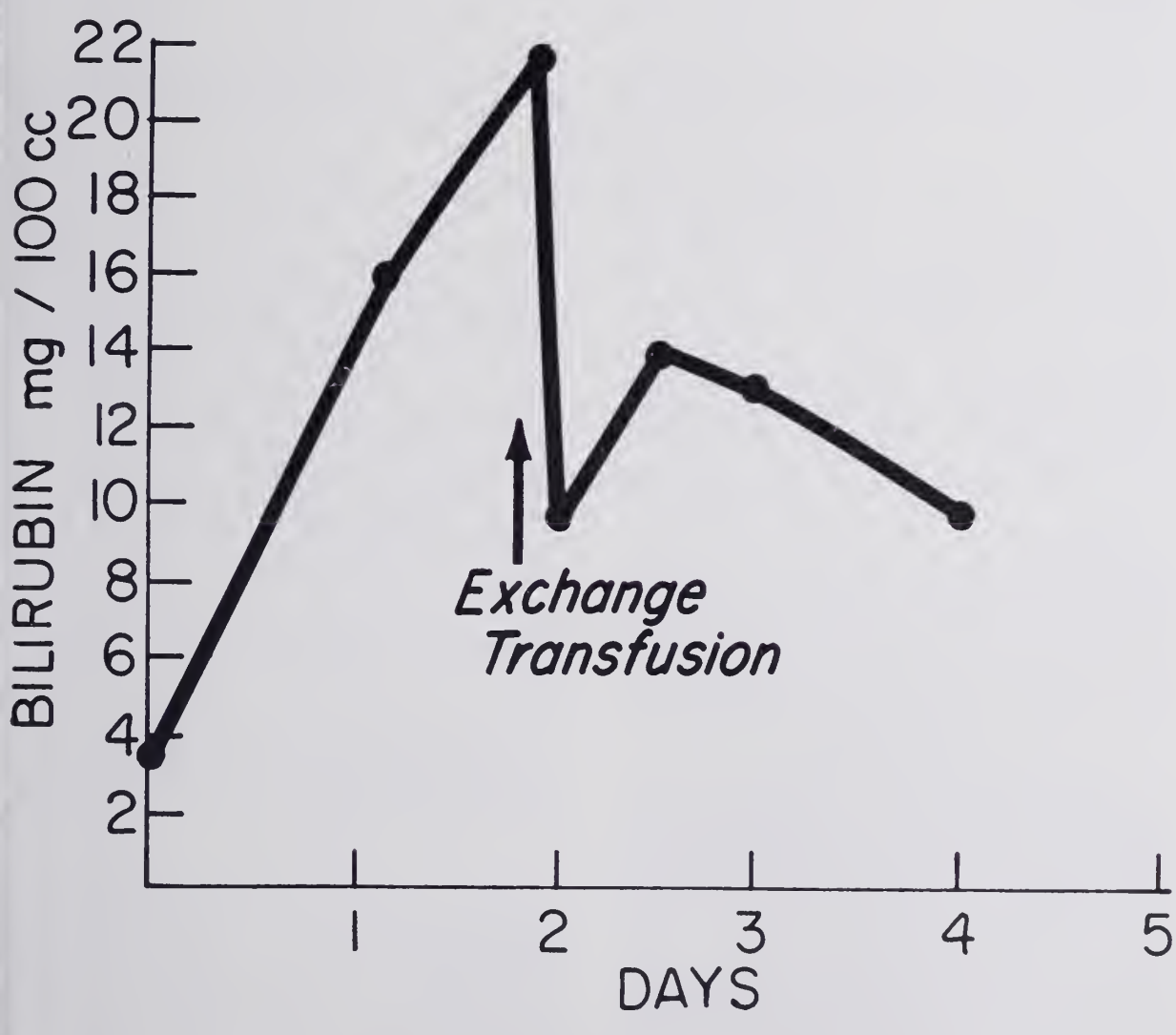


Figure 2. Concentration of Bilirubin Determinations on Infant in Case 3.

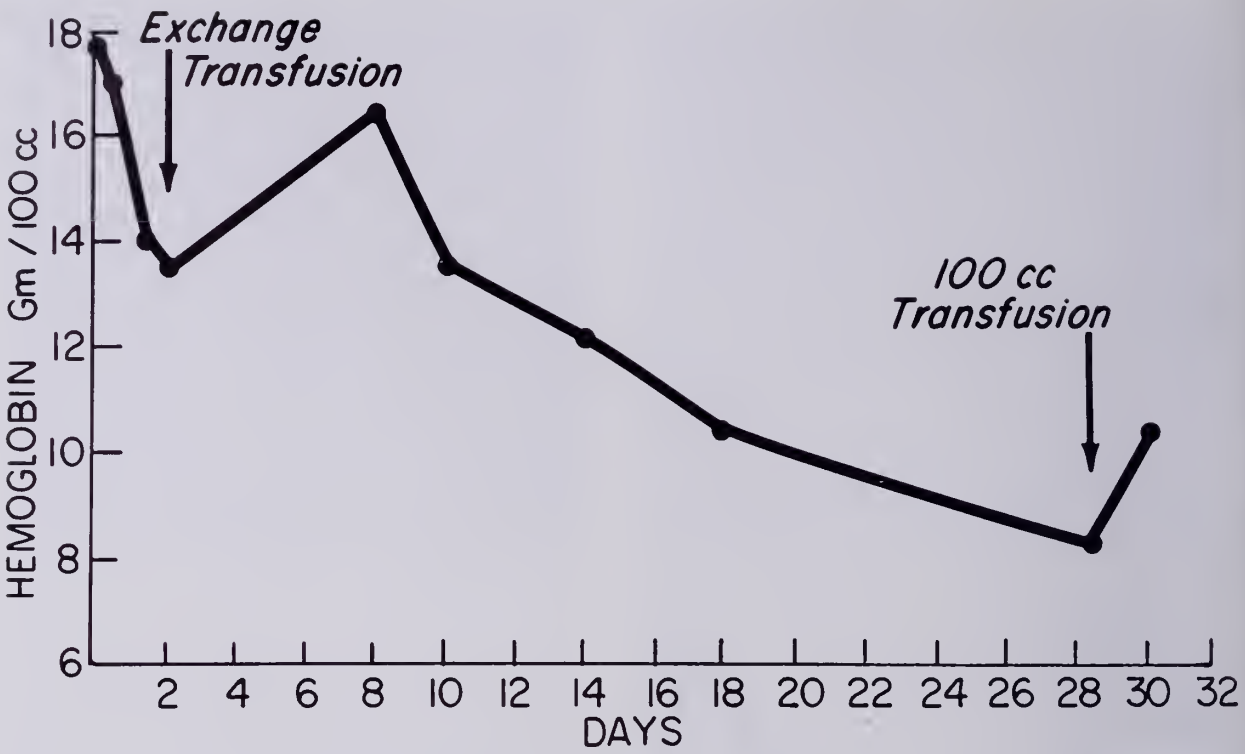


Figure 3. Concentration of Hemoglobin Determinations on Infant in Case 3.

children with hemolytic disease, all presumably due to ABO incompatibility.

SUMMARY

This has been a brief presentation on the antigens and antibodies of the ABO blood group system, and the natural and immune antibodies have been differentiated and discussed.

The hematologic and serologic findings in normal heterospecific pregnancies have been reviewed.

Hemolytic disease of the newborn as a result of the ABO incompatibility has been discussed, three cases of ABO incompatibility have been reported, and comments have been made on the findings.

The details of the laboratory procedures have been set forth in tables, and some definitions of terms will be provided in the appended glossary.

ACKNOWLEDGEMENT

I wish to thank Drs. S. F. Fomon and W. W. McCrory for their help in the preparation of this manuscript, Dr. H. L. Moffet for permission to report his patient, and Mr. P. C. Johnson for his technical assistance in performing the antibody determinations.

GLOSSARY

Agglutinin: an antibody that causes agglutination of a particulate antigen, e.g., red cells

Agglutinogen: any substance which, acting as an antigen, stimulates the production of an agglutinin

Conglutination: specific clumping of cells produced by the combined action of univalent or "blocking" antibodies and conglutinin, a factor present in bovine albumin that causes agglutination of cells coated with univalent antibody

Direct Coombs test: a test for the presence of antibody against red cell antigen on the surfaces of red cells, indicative of sensitization

Heterologous antibody: antibody against an antigen not naturally present in the body

Heterospecific pregnancy: a pregnancy in which the mother and the infant have differing blood types

Homologous antibody: an antibody against the individual's own antigens, e.g., blood-group antigen

Homospecific pregnancy: a pregnancy in which mother and infant have the same blood type

Indirect Coombs test: a test for the presence of non-agglutinating antibodies in serum against red-cell antigens.

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The Prophylaxis and Treatment of Tetanus

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DUBUQUE

TETANUS, OR LOCKJAW, is not a common disease, but the seriousness of its symptoms and its high mortality rate make it imperative that every effort be made to reduce its incidence. The record of the Armed Services of the United States during the past 40 years demonstrates that tetanus is a preventable disease. The Army's experience during World War II shows that, following a properly conducted immunization program in which toxoid was used, only one soldier died from that disease, though 2,734,812 were hospitalized for wounds and injuries. Yet despite the existence of a nearly perfect means of prevention, between 500 and 600 people die of tetanus in the United States each year, and at least 1,200-1,500 are subjected to the suffering and expense that are connected with this dreadful disease. During World War II, more than 1,500 civilians in the United States died of tetanus, while in the same period of time, only two members of the Armed Forces, properly immunized, died of it. During the Okinawa campaign, 150 cases of tetanus were reported in the non-immunized civilian population associated with the U. S. forces, but there were no cases in the American military personnel. During the Battle of Manila, in 1945, there were 500 cases of tetanus among civilians—an incidence of 40 for every 1,000 of the wounded.[10] In the State of Iowa, there were 46 deaths from tetanus in the years 1949 through 1958.[25] Since 1951, there have been nine cases of tetanus treated in the hospitals of Dubuque, with one death.

The real tragedy of tetanus is not its high mortality rate or its dreadful symptoms, but the fact that it is a preventable disease and could be completely eradicated by a vigorous program of immunization with tetanus toxoid.

The purpose of this presentation is to review the nature of tetanus, its prophylaxis and its treatment. Six cases of tetanus treated by the authors since 1953 will be presented. None of these patients had previously been immunized with tetanus toxoid, but three of them had received 1,500 units of tetanus antitoxin at the time of injury. One patient did not seek medical attention at the time of injury, and received no treatment of his wound initially. In the two remaining cases, the patients received debridement and their wounds were sutured, but they received no prophylaxis against tetanus. Both of these latter patients took legal action against the physician who had cared for their injuries initially, because of his failure to administer tetanus prophylaxis. Our experience with these cases points out the inadequacy of the 1,500-unit dose of tetanus antitoxin in preventing the development of tetanus under certain conditions. With the great increase in the numbers of highway accidents and farm injuries, as well as the constant threat of atomic warfare with the possibility of mass civilian casualties, it becomes all the more important that we carry out a widespread prophylaxis against tetanus in the civilian population.

Dr. Alt presented a condensed version of this paper in Iowa City, on October 9, at the meeting of the Iowa Academy of Surgeons.

HISTORY

The symptoms of tetanus have been known to medical observers for many centuries. Accurate descriptions of the disease can be found in the writings of Hippocrates and Aretaeus, but it was not until 1800 that the infectious nature of tetanus was suspected. In 1884, Carle and Rattone produced tetanus in animals by transferring a portion of a human wound infected with tetanus. In the same year, Nicolaier produced experimental tetanus with typical spasms by injecting garden soil into animals. Nicolaier first reported the bacillus which he thought to be the cause of the disease. Rosenbach, in 1886, described the characteristic spores, but it was Kitasato,[14] in 1889, who first produced the organism in pure culture. At about the same time, VonBehring and Kitasato established the toxic nature of the disease by inoculating with pure culture filtrates and producing antitoxin in animals.

The manner in which the toxin is transported to the central nervous system has been extensively investigated. Marie and Morax, followed by Meyer and Ransom, provided a great deal of experimental evidence that appeared to show that the toxin reached the cells of the central nervous system by way of the motor roots. Before 1934, most investigators of the problem appeared to accept the opinion that the central nervous system cells could not absorb the toxin from the blood stream. Experiments by Abel, Hampil, Firor[1] and others supplied more evidence that the toxin was absorbed by the lymphatics and then carried by the blood stream to the central nervous system. They theorized that there are two components in the toxin, one of which acts upon the cells in the central nervous system, producing clonic spasm, and the other of which acts directly upon the muscles, producing tonic contractions.

Probably the most outstanding work in the fight against tetanus was that of Ramon in France, in 1925, when he developed tetanus toxoid by the formalin neutralization of the tetanus toxin.

THE ETIOLOGIC AGENT

Tetanus is caused by the action of a bacterial exotoxin on the central nervous system. This toxin is elaborated by the Clostridium tetani bacillus, which is a gram-positive, drumstick-shaped rod. Under most conditions this bacillus is a complete anaerobe. The vegetative forms of the tetanus bacillus are easily destroyed by heat or chemical agents, but the tetanus spores will resist dry heat at 80 degrees centigrade for about one hour, and live steam for about five minutes. Direct sunlight diminishes the virulence of the spores and eventually destroys them. Protected from sunlight and other deleterious influences, tetanus spores may remain viable and virulent for many years.[26]

Although there is a very wide distribution of the tetanus bacillus in nature, the incidence of tetanus infection is comparatively small. The nature of wound and the simultaneous presence of other microorganisms seem to be important factors in determining whether or not the tetanus bacillus is enabled to proliferate. Deep lacerated wounds, in which there is considerable tissue destruction and in which foreign material such as clothing, wood or glass splinters, or soil is deeply imbedded, are particularly favorable for the development of these organisms. Compound fractures and gunshot wounds are especially likely to supply favorable conditions. The majority of cases of tetanus follow puncture wounds, but lacerations, scratches, abrasions, burns and compound fractures all serve as portals of entry and supply the optimum conditions for this type of infection. In some instances, the injury has been so trivial that the patient has forgotten it, and a definite portal of entry cannot be determined.

The spores of the Clostridium tetani organism may lie dormant in a healed wound for many months or years, and then become active following later surgery. Cases of fatal tetanus following excision and grafting of old wounds have been reported.

INCUBATION PERIOD

A definite period of incubation elapses between the time of infection with the tetanus bacillus and the development of the first symptoms. In rare cases, this may be as short as 24 hours, but it is usually between five and seven days in the more acute cases. In the so-called chronic cases, a period of four to five weeks may elapse before the development of symptoms. In these instances, the onset is generally less abrupt, the symptoms slower in development, and in most cases, the prognosis more favorable. Creech, Glover and Ochsner[6] reported that in 558 cases the incubation period of the survivors was almost 40 per cent longer than for those who succumbed to the disease. However, there were survivors among those whose incubation periods had been only four days, and deaths among those whose incubation periods had been 20 or more days.

PROGNOSIS

The prognosis of tetanus is influenced by a large variety of variables, but probably the most important factors are the promptness and quality of the treatment. Creech, Glover and Ochsner[6] report a steady decrease in the mortality rate for cases of tetanus treated at Charity Hospital, New Orleans, over the past 50 years. During the period from 1943 to 1956, they report a mortality rate of 30.6 per cent among 558 cases. Other authors report mortality rates ranging from 25 to 60 per cent, and Perlstein[20] reports that during the past 10 years most patients seen with tetanus at the Cook County Hospital, Chicago, were persons addicted to heroin, and that the disease resulted from the use of contaminated heroin. In these cases, the onset was extremely rapid, with symptoms occurring within 24 hours or less, and the mortality rate for that group was over 90 per cent.

DIAGNOSIS

Tetanus is characterized by persistent rigidity of muscles or tonic tetanospasm. In over half of the cases, trismus (spasm of the muscles of mastication) is the initial symptom, and in almost every case this symptom develops some time during the course of the disease. As the disease develops, more generalized tonic contractions of the muscles of the jaws, face, neck, back and abdomen develop. The muscles of the extremities are also involved, but usually to a lesser extent than are the abdominal muscles or the muscles of the face and neck. A stiff neck eventually develops in over three-fourths of the patients, and persistent

opisthotonos occurs in approximately 60 per cent of patients. Generalized rigidity, with dysphagia and persistent risus sardonicus develops in approximately one-half of the cases. The convulsions associated with tetanus are peculiar to this disease. The generalized convulsions consist of sudden bursts of tonic contractions of groups of muscles causing opisthotonos, flexion and adduction of the arms, with cringing of the fists on the thorax, and extension of the legs and feet. Facial grimaces, with accentuated trismus, are present, and the patient appears to be in severe pain. Convulsions are seldom the initial symptom, but they ultimately develop in over three-fourths of patients.[4-9]

In the less severe cases, the spasm may be limited to the injured extremity, and this local spasm may be the only initial sign of the disease. Since trismus and stiffness of the neck are the commonest initial symptoms, it is important to differentiate trismus due to tetanus from trismus due to other diseases such as intraoral infections, inflammation of the parotid gland, or injury about the jaw and neck. One must also be aware of the possibility of hysterical trismus in patients aware of the signs of tetanus. The diagnosis of tetanus should not be based on the bacteriologic studies, for the organism is difficult to recover and, in most cases, cannot be cultured from the wound.

TREATMENT OF ESTABLISHED TETANUS

Early diagnosis and prompt, adequate treatment have been responsible for a steady decrease in the mortality rate of this disease. Serotherapy, sedation, tracheostomy, adequate fluid, electrolyte and caloric intake, chemotherapy and steroid therapy all play their parts in reducing the number of deaths, but constant skilled nursing plays an extremely important role and is probably the most difficult part of the treatment to obtain.

Treatment of the Local Wound. When the patient is first seen, a tentative diagnosis is made, the patient is placed in a darkened, quiet, single room, and special-duty nurses are provided round-the-clock, with instructions never to leave the patient unattended.

In approximately one-third of the cases, the portal of entry for the organism is unknown, but in those cases where a wound is present or where a foreign body is embedded deep in the wound, the area is completely excised, and all foreign material is removed. These wounds are *not* closed. If the patient is well sedated, this minor surgical procedure can usually be carried out under local anesthesia.

We feel that antibiotic therapy is indicated in all cases to minimize or control secondary wound infection and reduce the incidence of respiratory infection. There is no proof that antibiotics have any effect whatsoever upon the course of the established tetanus.[3, 13, 16]

Management of the Problem of Circulating Toxin. The patient is skin tested for sensitivity to horse serum, and if the result is negative, he is immediately given 50,000 units of tetanus antitoxin in 1,000 cc. of 10 per cent glucose in water by intravenous drip, and 50,000 units of tetanus antitoxin intramuscularly. If the skin test is positive, rapid desensitization is carried out, and injections are given as listed later in this article, or bovine antitoxin can be used. We feel that the use of intrathecal antitoxin is contraindicated, and in our series we have not used antitoxin infiltration of the tissues about the site of injury. In the more severe cases, injections of 10,000 units of tetanus antitoxin may be given intramuscularly at from two to three day intervals until the disease is obviously under control. Other points concerning passive and active prophylaxis will be given later. Whenever tetanus antitoxin is given, even in the presence of a negative skin test, adrenalin (1:1,000 dilution), oxygen and intravenous fluids are kept readily available for use if anaphylactic shock develops.

Treatment of Diagnosed Established Tetanus. Adequate sedation and in most cases a state of hibernation are maintained through the use of sedatives and anticonvulsants, as well as muscle relaxants to relieve the symptoms of muscular spasm and convulsions. Barbiturates, mephenesin (Tolserol), chlorpromazine (Thorazine),[19] tribromoethanol (Avertin), paraldehyde,[15] and in some patients curare[2] are used to accomplish this end. We feel that any type of sedative or hypnotic agent, when properly administered to relieve spasm and convulsions and to avoid respiratory depression has the same effect on the outcome of tetanus.

In two of the present cases reported, delay in the use of tracheostomy was nearly fatal. In the severe case of tetanus, when large amounts of sedatives and muscle relaxants are needed to control the spasm and convulsions, it is impossible to maintain adequate tracheobronchial toilet and keep a clear airway. We feel that the tracheostomy should be performed before the patient gets into respiratory difficulty, and before atelectasis and pneumonitis develop.[8] Creech, Woodall and Ochsner[5] strongly recommend the early use of tracheostomy in the treatment of tetanus. They feel that it eliminates practically all the respiratory embarrassment by maintaining an open airway and greatly facilitating the removal of tracheal and bronchial secretions. They also feel that deep sedation predisposing to respiratory complications is unnecessary if the open airway is maintained.

The most important factor in the treatment of tetanus is good supportive care of the patient.[12] Stated more simply, tetanus is a self-limiting disease, the outcome of which is largely determined

before the treatment can be instituted. In the absence of a lethal amount of toxin fixed in the nerve tissue, the majority of patients will survive. Prevention and treatment of the complications of the disease are most important. Constant nursing care by nurses trained in the care of acutely ill, unconscious patients is extremely important. The nurse must be instructed never to leave the patient unattended. Repeated aspirations of the respiratory tract or the tracheotomy tube must be carried out. Suction of the tracheotomy tube must be intermittent and atraumatic. The nurse must be trained promptly to recognize convulsive seizures, with respiratory arrest, and to institute immediate life-saving treatment. When the patient is under deep sedation, he must be turned at intervals to prevent pressure sores and hypostasis.

Vomiting and aspiration are a constant threat to patients with severe tetanus. The fluid and electrolyte intake must be given with intravenous fluids. The caloric intake can be brought up to 2,000 calories per day through the use of intravenous alcohol. In most cases, an intravenous puncture is used, with polyethylene tubing through the great saphenous vein. Some authors advocate the use of gavage with a Levin tube, but great care must be exercised if this method is employed, so as to prevent aspiration if vomiting occurs. Gastrostomy has also been advocated by some authors, and it is no doubt indicated in elderly and in malnourished patients. Our patients have all been young, well nourished individuals, and their fluid and caloric intake was maintained with intravenous fluids.

Cortisone therapy[2] can be used when death from exhaustion appears to be a definite possibility, and in those cases it is used in doses of 100 mg. three times a day, intravenously or intramuscularly. In most cases, however, it is used in smaller doses to combat the sensitivity reaction to the antiserum or to antibiotics.

It is important that after the patient's recovery from tetanus he should be given a course of tetanus toxoid, 0.5 cc. at three to six week intervals for three doses of the fluid toxoid or two doses of the alum-precipitated toxoid. The disease does not produce active immunity.

PROPHYLAXIS

Prophylaxis against tetanus can be subdivided into three parts:[18] (1) proper emergency management of wounds; (2) passive immunization at the time of injury; and (3) active immunization.

Emergency Management of Wounds. There are numerous articles in the literature dealing with the treatment of open wounds in general. All of us have been exposed to years of training in the proper methods and technics of handling traumatic wounds. All of us, certainly, must have met with the major problems that result from the inadequate care of a minor wound, too. Any open wound, even a minor one, deserves the dignity of the application of all the principles of good wound care.[21]

The value of a thorough debridement of the wound, with removal of all foreign particles and all devitalized tissue, cannot be overemphasized in the prevention of tetanus. The use of antibiotics locally and systemically is no substitute for proper wound care.

Frequent thorough irrigations of the wound with isotonic saline solution during debridement aids in the removal of particulate foreign material and bacteria. In the case of large, grossly contaminated wounds with severe contusions of the deeper structures, it is best to allow the wound to remain open after debridement. A secondary closure can be accomplished several days later. Wounds seen eight to 10 hours following injury should also be left open after adequate debridement and irrigation.

Antibiotic therapy is used in the cases of compound fracture, and in large wounds with considerable deep-tissue destruction, to reduce the incidence of pyogenic infection. Antibiotic treatment, however, cannot be relied upon for the prevention of tetanus.

Passive Immunization. Tetanus antitoxin gives temporary protection, and is used in those patients not previously immunized by a series of two or three tetanus toxoid injections.

The tetanus antitoxin commercially available is made from the serum of horses that have been actively immunized. Therefore, tests for sensitivity to horse serum must be carried out before tetanus antitoxin is administered. The tetanus antitoxin must be diluted 1:10 in physiological saline solution for use in the intracutaneous or ophthalmic testing. A skin wheal should be made that is no larger than the head of a pin, or a very small drop of the 1:10 dilution should be placed in the eye. Positive reactions will be obtained if improper dilutions are used, or if the size of the dose used for the test is too large.

If these tests are positive, the hazard of serum anaphylaxis may be greater than that of tetanus. With desensitization, tetanus antitoxin may be used only in the tetanus-prone wound that presents a reasonable possibility of contamination with tetanus spores. Judgment is quite easy regarding wounds in which such contamination is either certain or most improbable. The decision is much more difficult between these extremes. Active immunization of the entire population would circumvent this difficulty.

In addition to the sensitivity tests, a history of allergies or of previous serum administration should be elicited. A tourniquet and 1:1,000 aqueous adrenalin must be immediately available. If the allergic history is positive, it is best to use 1:100 dilution for the skin test. After 20 minutes, the absence of erythema and induration, or of

conjunctival injection indicates a probable lack of sensitivity. It should be remembered that negative skin tests render immediate reactions unlikely, but have nothing to do with delayed reaction or serum sickness. If the sensitivity test to equine tetanus antitoxin is positive, similar tests may be performed with the bovine antitoxin. The latter drug, although more expensive, is available in the commercial market.

Following a negative sensitivity test, 1,500 units of tetanus antitoxin are injected intramuscularly as soon after the injury as possible, regardless of the age or size of the patient. For large wounds with gross contamination, 3,000 units are given. For persons seen 24 hours after injury, the dose of antitoxin should be doubled for each day of elapsed time, up to a total of 12,000 units. In instances of inadequately debrided wounds, 1,500 units of antitoxin should be repeated every seven days for two or three doses. With co-existing diabetes mellitus or arteriosclerotic peripheral vascular disease, 3,000 units of tetanus antitoxin should be given initially. It should be noted that with repeated doses, the likelihood of sensitization increases, and the sensitivity test must be repeated before each dose. A large dose is not more likely to sensitize than is a smaller one, but it has a longer duration of action.

Active Immunization. This form of protection is most effective and is preferable. During World War II, while more than 1,500 people in the United States died of tetanus, only two members of the Armed Services died of this disease. The incidence of reaction from the tetanus toxoid injections, as reported by the Army, was two in 100,000 injections. Active immunization against tetanus is induced by two injections of alum-precipitated toxoid (0.5 cc.), or three injections of fluid toxoid at intervals of three to six weeks. Active immunization may not be regarded as complete until an additional reinforcing dose has been given six to 12 months after the primary immunization.[7] A booster dose should be given every four or five years, or at the time of an injury. The more slowly absorbed precipitated toxoid should be given as the routine booster, but the emergency booster should be of the more rapidly absorbed fluid toxoid, which will give protective levels within four days. The dosage prescribed for the booster dose is 0.5 cc.

Hampton and Hard[11] have shown that very rapid protective levels of tetanus antitoxin have been developed by intradermal toxoid injections. Their method was to inject 0.5 cc. of tetanus toxoid intradermally in divided doses at three sites, on the first, fourth and seventh days. All of their patients tested developed a high concentration of actively produced antitoxin by the twenty-seventh day, and in most cases an adequate active immunity by the seventh to tenth day.

Those patients not previously immunized, having received severe or multiple injuries requiring prolonged treatment and repeated manipulations, should be actively immunized with intradermal toxoid, in addition to passive immunization. This would obviate the necessity for giving repeated doses of antitoxin in this type of case. A previously immunized patient who has not received a booster during the preceding five years and who has sustained an injury that is clearly tetanus prone should receive a combination of toxoid and antitoxin. The antitoxin will protect him until the delayed response from the booster of toxoid has developed. All patients not previously immunized with toxoid should receive their first injection of alum-precipitated toxoid at the same time that they are given the tetanus antitoxin.

We feel that the patient should receive the tetanus toxoid regardless of the severity of the injury, even if tetanus antitoxin is not deemed necessary or is contraindicated because of sensitivity. An injection of toxoid should be given with a separate syringe, and in the opposite arm from the site of injection of tetanus antitoxin. The dose of toxoid is repeated at three to six week intervals until a total of three doses of the fluid toxoid or two doses of the precipitated toxoid have been given. The type of treatment being administered should be thoroughly explained to the patient, and he should be made to understand that with subsequent injuries, only a booster dose of tetanus toxoid will be necesary. Sherman and Barnhouse[23] list three specific reasons why active immunization should be started simultaneously with passive immunization: (1) The possibility of serum sensitivity will arise if antitoxin treatment is ever needed again. (2) If there is a sensitivity and the patient is desensitized, there is evidence that a therapeutic level cannot be achieved even with desensitization, for the protein will be excreted at a greatly accelerated rate. Cases have been reported in which tetanus antitoxin failed to prevent tetanus in a patient previously given tetanus antitoxin, and such failures have been seen both with and without the presence of clinical serum sensitivity. (3) Active immunization is preferred protection.

DESENSITIZATION

If the skin or conjunctival test is positive for sensitivity to the tetanus antitoxin, the procedure is to give divided, slightly increasing doses of the antitoxin. In giving the antitoxin to a patient who has proved sensitive to the horse serum, one should provide constant medical observation and give the injections at 30-minute intervals according to the following schedule:[23]

First dose, 0.1 cc. of TAT diluted 1:10
Second dose, 0.2 cc. of TAT diluted 1:10
Third dose, 0.5 cc. of TAT diluted 1:10
Fourth dose, 0.1 cc. of TAT undiluted
Fifth dose, 0.2 cc. of TAT undiluted
Sixth dose, 0.5 cc. of TAT undiluted

Seventh and subsequent doses until the end of the series, each 0.1 cc. undiluted TAT every 30 minutes.

A syringe containing 1.0 cc. of 1:1,000 adrenalin and an ice bag and tourniquet must be immediately available. Should a reaction occur, the ice bag should be placed at the site of the injection, and a tourniquet should be applied to prevent rapid absorption of the material. Should a reaction occur, the treatment either should be discontinued or should be advanced even more slowly. According to Singleton and Little,[22] the use of antihistamine agents have no value in preventing serum reactions following the injection of tetanus antitoxin. Likewise, cortisone and ACTH are of no value in treating immediate serum reactions. Their value is in the treatment of delayed serum sickness.

SERUM SICKNESS

Serum reactions following the injection of horse serum or other foreign protein usually occurs within eight to twelve days following the injection. Signs and symptoms are local or generalized edema, urticaria, pruritis, fever, arthritis and lymphadenopathy. Rarely, the serum reactions affect the nervous system. Cases of brachial plexus neuritis, with pain and paresis, have been reported following the prophylactic use of TAT. Other reactions have been reported—perceptive deafness, ocular palsy, hemiplegia, isolated peripheral nerve palsy, aphonia, etc. Newal and McVay say that the incidence of serum sickness is 11.8 per cent. Hampton[11] has reported anaphylaxis rates varying from one in 50,000 to one in 200. No very accurate figures on the incidence of serum sickness can be obtained because of the apparent differences in standards employed by various physicians. In our experience, however, it has been a very common and disabling complication. In most cases, antihistaminics and analgesics suffice to relieve the symptoms of this disease, but occasionally the symptoms are so severe and so prolonged that hospitalization is necessary, and ACTH or cortisone must be given.

CASE REPORTS

Case 1. A 25-year-old white male was admitted to the hospital on April 14, 1953, one hour after receiving second and third degree burns involving the entire right foot and ankle, when molded metal was spilled into his shoe. The burn was debrided and dressed in the hospital operating room, and a vaseline gauze dressing was applied. He had had no previous injections of tetanus toxoid or tetanus antitoxin, and he was therefore given 1,500 units of tetanus antitoxin, following a negative skin test. He was placed on penicillin therapy, but 24 hours later he developed a generalized rash that was thought to be secondary to the penicillin. The symptoms of this penicillin reaction subsided after six days. On the fifth day following his injury, he developed severe epistaxis, requiring bilateral nasal packs. On the ninth day, the wound was debrided, with excision of the eschar under general anesthesia. On the seventeenth day, when a clean granulating surface presented, a split-thickness skin graft was taken from the lower abdomen and placed on the right foot. Twelve hours later, the patient complained of stiffness of the jaw and difficulty in opening his mouth. He also complained of stiffness of the neck and upper chest muscles. Examination revealed a marked trismus, with stiffness of the neck muscles, rigidity of the abdominal muscles and moderate opisthotonos. The reflexes were hyperactive.

A diagnosis of tetanus was made, and treatment was started immediately. The patient was given 50,000 units of tetanus antitoxin intravenously in 1,000 cc. of 5 per cent glucose in water, after a negative skin test. He was placed in a single, quiet, darkened room, and special-duty nurses were placed in constant attendance. He was given sodium luminal, grains 3 stat and grains 2 every hour, for restlessness, as needed. Tetracycline, 500 mg., was administered every four hours. On the first day, 20,000 units of tetanus antitoxin were given intramuscularly every four hours, and on the second day, 10,000 units were given every four hours. Cortisone in doses of 50 mg. every four hours for six doses was administered intramuscularly, and then the dosage was dropped to 50 mg. every six hours. Because of rapidly developing dysphagia, the patient's fluid requirements were met by means of intravenous 5 per cent glucose in water, alternating with 5 per cent glucose in electrolyte solution. The grafted area was dressed, and the graft was completely removed. Massive moist saline dressings were applied to the granulating wound. His temperature ranged from 101 to 103°F. for the first four to five days, and he developed a marked tachycardia. His respirations ranged from 25 to 35 per minute. Because of severe muscular spasms with pain and because of extreme restlessness, very large amounts of sodium luminal were given to him, both intramuscularly and intravenously. This medication was supplemented by the administration of intramuscular paraldehyde. With the deep sedation, he developed large accumulations of mucus in the tracheobronchial tree, and this, along with moderate laryngospasm, produced marked respiratory difficulty. On the third day of the disease, a tracheostomy was performed. On the following day, he appeared less restless and required much less sedation.

On the sixth day following the onset, the patient began to show marked improvement, with decreasing muscular rigidity and a decrease in the symptoms of general toxicity. Eight days after the onset of tetanus, he was able to take all nourishment by mouth, and although he still had mod-

erate muscular rigidity, only small doses of sedation were necessary to keep him comfortable. On the sixteenth day after the onset of tetanus, a split-thickness skin graft was again placed on the granulating area of the right foot, and the wound healed satisfactorily. After discharge from the hospital, the patient was given three injections of alum-precipitated tetanus toxoid at three-week intervals.

Case 2. A 42-year-old white male was admitted to St. Joseph Mercy Hospital, Dubuque, on May 1, 1953. He gave a history of having received a buzz-saw injury to his left thumb 15 days prior to admission. The wound was initially cleaned and sutured by his family physician, but he had not been given tetanus antitoxin. Several days after the injury, his thumb became extremely tender and swollen. At that time, he visited another physician, who removed the sutures. Ten days following the injury, he complained of vague generalized stiffness of his muscles, and two days after that, he developed profuse diaphoresis, with beginning dysphagia.

On admission to the hospital 15 days after his injury, he presented the picture of severe generalized tetanus. He had marked trismus and generalized muscular rigidity. He demonstrated the typical risus sardonicus and opisthotonos. The skin at the site of injury of his left thumb was healed, but there was mild redness and slight swelling. He had had no convulsions prior to admission. The diagnosis of tetanus was obvious, and therapy was instituted immediately. He was placed in a single, quiet, darkened room, and graduate nurses were placed in constant attendance. No visitors were allowed. After a negative skin test for sensitivity to horse serum, he was given 50,000 units of tetanus antitoxin intravenously. Sodium phenobarbital, in doses of grains 2 intramuscularly, were repeated every 30-60 minutes to control muscle spasm. At times, it was necessary to supplement this with intravenous or intramuscular doses of paraldehyde. He was given 20,000 units of tetanus antitoxin intramuscularly every four hours during the first 24 hours, and then the dosage was reduced to 10,000 units intramuscularly every eight hours. During the course of his illness, he received 200,000 units of tetanus antitoxin intramuscularly, in addition to the initial dose of 50,000 units of tetanus antitoxin intravenously. On the day of admission, after he had been adequately sedated, the site of injury on the left thumb was excised under local anesthesia, and the wound was allowed to remain open.

Because of the patient's marked dysphagia and deep sedation, his fluid requirements were met with continuous intravenous fluids by way of a polyethylene catheter into the great saphenous veins. Penicillin and streptomycin therapy were used in an effort to reduce the possibility of respiratory complications. He developed moderate serum reaction and was given cortisone to alleviate these symptoms. The patient remained in critical condition for the first eight days in the hospital, but then the muscle spasm gradually subsided. He was then able to take liquids by mouth, and his condition gradually improved so as to permit his leaving the hospital on the eighteenth day. There was still slight muscle spasm, chiefly of the jaw and abdominal muscles, at the time of his discharge. At present, this patient is living and well, and shows no ill effects of having had this serious illness.

Case 3. A 29-year-old white married woman was admitted to Xavier Hospital, Dubuque, on November 9, 1953. She had been in excellent health until there days prior to admission, when she noticed a slight stiffness of the jaw. On admission, her only symptom other than the mild trismus was a slight soreness and stiffness of the shoulder muscles for the past 24 hours. She had had no convulsions. On close questioning, she remembered that she had run a weed stubble into her right leg 14 days prior to admission to the hospital. The puncture wound had completely healed several days following the accident, but the area had remained reddened and slightly tender.

A diagnosis of tetanus was made, and therapy was immediately instituted. The patient was placed in a single, quiet, darkened room, and graduate nurses were placed in constant attendance. Following a negative skin test for sensitivity to horse serum, she was given 50,000 units of tetanus antitoxin intravenously. Then, 20,000 units of tetanus antitoxin were administered intramuscularly every four hours for three doses, and 20,000 units were given every 12 hours for the next two doses. On the two following days, she was given 10,000 units of tetanus antitoxin every 12 hours. Sedation consisted of intramuscular sodium luminal in doses of 2 grains every two to four hours as needed to produce muscle relaxation.

On the day of admission, the wound on the lateral surface of the right lower leg was completely excised under local anesthesia, and a weed stubble 0.5 cm. in length was removed. Antibiotic therapy in the form of penicillin, 400,000 units, and streptomycin, 0.5 Gm., were given every eight hours. By the second day after admission, the muscular spasm had greatly increased, and intramuscular paraldehyde was administered to produce deeper sedation. From the second to the fourth day following admission, she had repeated mild convulsive seizures, and during this time she had considerable respiratory difficulty. Tracheostomy was considered, but was not carried out because on the following day her condition began to improve, and she made a rapid recovery. By the ninth hospital day, she was taking fluids well by mouth, and her muscular spasms had nearly disappeared. At this time, she developed a severe reaction to horse serum, with generalized rash and

generalized lymphadenopathy. She was treated with cortisone and antihistamines, and after several days of feeling quite miserable with the serum sickness, she experienced relief from the symptoms and left the hospital on the sixteenth day.

This patient had received no injections of tetanus antitoxin or tetanus toxoid prior to the onset of her illness. Since she had the disease, she has been actively immunized against tetanus by means of three injections of alum-precipitated tetanus toxoid.

Case 4. An 18-year-old white woman was admitted to St. Joseph Mercy Hospital, Dubuque, on February 8, 1955. She complained of stiffness and soreness of the jaw muscles and of a headache that had been present for two days. She was known to have been extremely irritable and restless on the day prior to admission. Nine days prior to admission, she had received a puncture wound on the dorsum of the right foot while sled riding. She had had no previous injections of tetanus toxoid or tetanus antitoxin, and she was given 1,500 units of tetanus antitoxin approximately 14 hours after her injury. Three days later, there was swelling and redness of the foot about the site of the puncture wound. Several days' injections of intramuscular penicillin were administered, and then the wound appeared to be healing satisfactorily.

On the eighth day following the accident, she experienced some dizziness and restlessness, and she awoke in the middle of the night complaining of stiffness of the jaw. Examination on admission to the hospital revealed mild tenderness at the site of the puncture wound on the right foot, but the skin was completely healed over the wound. There was moderate trismus and slight stiffness of the neck muscles. Her blood count and urinalysis were within normal limits, and the sedimentation rate was 18 mm. per hour. Her pulse, temperature and respirations were all normal. A diagnosis of tetanus was made, but it was felt that her symptoms were very mild, and that deep sedation would not be immediately required. She was given 25,000 units of tetanus antitoxin intravenously, following a negative skin test for sensitivity to horse serum. Then, 10,000 units of tetanus antitoxin were given intramuscularly every six hours. On the third day following admission, the antitoxin dosage was reduced to 10,000 units every eight hours, and on the fifth day it was reduced to 5,000 units every eight hours. The repeated intramuscular doses of antitoxin were continued until the sixteenth hospital day. Antibiotic therapy consisting of penicillin, 400,000 units, and streptomycin, 0.5 Gm., were administered intramuscularly twice daily.

On the day following admission, the patient developed a rash surrounding the sites of injection of the tetanus antitoxin, and she was therefore placed on cortisone therapy. The trismus and the aching of the jaw and neck muscles persisted for 10 days following admission, and then gradually subsided. She had no convulsions and no generalized rigidity.

Case 5. A 24-year-old white male was admitted to Xavier Hospital, Dubuque, on April 15, 1959. His admission complaints were stiffness of the jaw and neck, with associated nausea and anorexia. He gave a history of having stepped on a nail on April 7, eight days prior to his admission to the hospital. Several hours following the injury, the wound was cleaned and bandaged by a physician, and he was given 1,500 units of tetanus antitoxin. He had received no previous tetanus toxoid injections, but three years previously, he had received 1,500 units of tetanus antitoxin following a crushing injury to his thumb. Three days following the puncture wound, he developed pain, redness and swelling of his foot, followed by purulent drainage from the puncture wound. He was advised to enter the hospital at that time, but he refused and was not seen again until the eighth day following his injury, at which time he complained of tightness of the neck and jaw muscles.

When first seen at the hospital, he was noted to have marked trismus, stiffness of the neck muscles, and moderately severe spasm of the abdominal muscles. He had had no convulsions, there was no dysphagia, and his breathing appeared normal. The right foot presented a puncture wound over the plantar surface at the base of the second toe, and there was a moderate purulent drainage from the wound. A diagnosis of tetanus was made, the patient was placed in a single, darkened, quiet room, and graduate nurses were kept in constant attendance. He was given 50,000 units of tetanus antitoxin intravenously, following a negative skin test for sensitivity to horse serum. He was also given 50,000 units of tetanus antitoxin intramuscularly at the same time. Sodium luminal in divided doses of grains 2 to grains 4 was administered intramuscularly to obtain relaxation. Intramuscular chloramphenicol, 1.0 Gm. every eight hours, was given. Curare in oil and wax, in dosages of 0.5 cc., was administered intramuscularly at daily or every-other-day intervals as indicated, to produce adequate muscular relaxation. Shortly after admission and after adequate sedation had been accomplished, the puncture wound on the right foot was widely excised under local anesthesia.

For the two days following admission, the patient's general condition gradually worsened. The muscular spasm increased, his temperature rose to 101°F. rectally, and his respirations became more labored and more rapid. The pulse rate ranged from 90 to 110. He developed his first convulsive seizure 36 hours after admission, and subsequent ones occurred at short intervals for the next three days. In an effort to control the seizures and the increasing muscular spasm, we admin-

istered increasing amounts of barbiturates, curare and mephenesin. A state of quite deep hibernation was thus produced, and the respiratory difficulties associated with deep sedation became more evident. In spite of repeated aspirations of his nasal and oropharynx, it was impossible to do an adequate job of removing the thick mucus accumulations and maintaining a free airway.

During this phase of his treatment, it was necessary to maintain his fluid intake completely by intravenous means. Ten per cent invert sugar in water, alternating with 10 per cent invert sugar in electrolytes, maintained the fluid and caloric intake. By the fourth hospital day, severe generalized muscular spasm was present, his temperature was 101-102°F., and he had a marked tachycardia. On the afternoon of the fifth day, his airway became completely obstructed by a large accumulation of mucus, and he became extremely cyanotic, with a very slow pulse rate. After approximately a 10-minute period of severe cyanosis, the obstructing material was dislodged, and with the administration of oxygen, his color returned to normal. An emergency tracheostomy was performed following this episode, and very marked relief from his respiratory difficulties ensued. With the tracheostomy, adequate toilet of his tracheobronchial tree was easily accomplished, and his respirations were much less labored. Within the next 24 hours, his tachycardia disappeared, his convulsions became much less frequent and his muscular spasms gradually subsided. On the fourth and again on the sixth day following his admission to the hospital, he was given 10,000 units of tetanus antitoxin intramuscularly. On the eighth day, he developed symptoms of serum sickness, and he was then placed on cortisone therapy.

By the fourteenth day, his temperature, pulse and respirations were completely normal, and he was taking adequate fluids by mouth. He was discharged from the hospital on May 6, the twenty-second day of his hospitalization. At that time he was up and walking about, he was taking a soft diet without difficulty, and his tracheostomy wound was healing satisfactorily. The patient was given 0.5 cc. of tetanus toxoid alum precipitate before leaving the hospital. This was the first of a series of alum-precipitated toxoid injections designed to give him active immunity.

Case 6. A 38-year-old white man was admitted to St. Joseph Mercy Hospital, Dubuque, on May 11, 1959. His only complaint on admission was a tightness in his jaw muscles and an inability to open his mouth adequately. Nine days earlier, he had received a compound fracture of the tip of his left fourth finger. The wound had been cleaned and sutured at the time of the accident, but he had not been given tetanus antitoxin. He had not received tetanus toxoid injections or tetanus antitoxin injections previously. Shortly after admission to the hospital, he noted difficulty in swallowing, and a rapidly increasing trismus. Physical examination was essentially negative, except for the marked tightness of the jaw muscles.

A diagnosis of tetanus was made, he was placed in a single, quiet, darkened room, and graduate nurses were placed in constant attendance. After a negative skin test for sensitivity to horse serum, he was given 50,000 units of tetanus antitoxin intramuscularly. The following day, he was given another injection of 40,000 units of tetanus antitoxin intramuscularly. He was sedated with sodium luminal in repeated doses of 2 grains. Curare in oil and wax was administered daily or every other day to reduce muscle spasm. An intravenous cut-down was performed, and a continuous drip of 10 per cent invert sugar in water, alternating with 10 per cent invert sugar in electrolyte, was administered. Tetracycline was administered in doses of 100 mg. intramuscularly every six hours. The wound on the left fourth finger was opened, all sutures were removed, and there was considerable subsequent purulent drainage.

For two days following his admission, his condition gradually worsened, generalized rigidity developed, a mild tachycardia followed, and his temperature rose to 102°F. At the height of the disease, he experienced moderate respiratory distress, with difficulty in eliminating the respiratory-tract excretions. The acute respiratory symptoms subsided after about 24 hours, and although tracheostomy was considered, it was not carried out. His course was complicated by a severe thrombophlebitis of the veins of the right arm, and for this he was placed on anticoagulant therapy.

After the fourth day in the hospital, the patient's symptoms of muscular rigidity rapidly subsided, and his condition gradually improved so that he could leave the hospital on the sixteenth day. Since leaving the hospital, he has been given a complete course of three injections of alum-precipitated tetanus toxoid. Two months after he left the hospital, an amputation of the distal half of the left forefinger was performed because of severe deformity and stiffness of the distal half of the finger.

SUMMARY AND CONCLUSIONS

Tetanus is not a rare disease, and it has been the cause of 46 deaths in Iowa in the past 10 years.

Passive immunization with tetanus antitoxin is not completely effective in preventing tetanus, but should be used in non-immunized patients unless contraindicated by sensitivity.

Antibiotic treatment cannot be relied upon for the prevention of tetanus, and has no specific action in the treatment of established tetanus.

Active immunization against tetanus with tetanus toxoid provides virtually complete protection against the disease.

Six cases of tetanus treated by the authors, along with a review of the important points in the treatment of established tetanus, have been presented.

Prompt therapy, good and constant nursing care, early tracheostomy, adequate sedation, and adequate maintenance of fluid balance and nutrition are chiefly responsible for the declining mortality rate of this disease.

A special plea is made for universal active immunization against tetanus with toxoid.

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Raymond Blank Hospital Pediatric Conference

Younker Building, Iowa Methodist Hospital, Des Moines

Friday, April 1

8:30 a.m. Registration, Second Floor (Fees: full course $15; partial course $7.50)

9:00 THE FOURTH LEE FORREST HILL LECTURESHIP: "Present Problems in Bacterial Infections"—Edward B. Shaw, M.D., professor of pediatrics, University of California Medical Center, San Francisco

10:45 "Diagnosis of Viral Diseases"—Russell J. Blattner, M.D., professor of pediatrics, Baylor University, Houston

12:30 p.m. LUNCH—Served by the Raymond Blank Hospital Guild—$1.00

2:00 "Neoplasms in Childhood"—James B. Arey, M.D., pathologist, St. Christopher's Hospital for Children, Philadelphia

3:45 "Surgical Approach to Neoplasms"—Tague C. Chisholm, M.D., Department of Surgery, University of Minnesota, Minneapolis

6:30 WELCOME HOUR AND DINNER FOR PHYSICIANS, WIVES AND OTHER GUESTS—Des Moines Club—$5.00 per person

Saturday, April 2

8:30 a.m. BUSINESS MEETING OF THE RAYMOND BLANK HOSPITAL ASSOCIATION

9:00 "Pathology of the Newborn"—Dr. Arey

10:45 "The Management of Burns"—Dr. Chisholm

12:30 p.m. LUNCH—$1.00

2:00 "The Uses and Abuses of Antibiotics"—Dr. Blattner

3:45 "The Use of Steroids in Infections"—Edward B. Shaw, M.D.

State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 65-YEAR-OLD MAN'S first admission to University Hospitals was for a chief complaint of chronic cough and shortness of breath of many years' duration. He had stopped his work as a mill hand at age 52 because of dyspnea. During the next 13 years, his weight fell from 137 to 114 lbs. He had a cough productive of a small amount of whitish sputum. The positive physical findings were: blood pressure 150/100 mm. Hg.; hyperresonance of the chest; and distant breath sounds, especially at the bases. The vital capacity was 2.1 liters, or 50 per cent of predicted normal. Skin tests for the common airborne allergens were all negative. A photoroentgenogram of the chest was read as healthy chest. The clinical diagnosis was pulmonary emphysema. Therapy consisted of saturated solution of potassium iodide, 15 drops in one-half glass of water four times a day, and Amodrine tablets, one as needed. During the next six months, the patient was seen twice for checkup examinations. Symptomatic treatment of the emphysema resulted in some improvement.

Four years later, when the patient was 69, he was admitted for the last time with a chief complaint of abdominal pain of three weeks' duration. His illness had started with the development of diarrhea which lasted three days. On the second day of diarrhea, he began to notice sharp, constant, moderately intense abdominal pain located in the right lower abdomen. This pain persisted up to the time of his admission. During the week before his admission, the pain was more intense. During that week, he had alternating diarrhea and constipation. His family doctor saw him three days before admission and recorded that he had a temperature of 102°F. and a white blood cell count of 12,000/cu. mm.

Physical examination revealed a thin white man in some respiratory distress. His blood pressure was 140/90 mm. Hg., his pulse count was 80 and irregular, and his respirations were 25. There were limited expansion and hyperresonance of the chest, and diminished breath sounds at the bases. A 2 x 5 cm. mass that was tender and soft on palpation was found in the right lower quadrant. There was no direct or rebound tenderness in the rest of the abdomen, and no other palpable masses. Normal bowel sounds were heard.

The patient was first examined in the Surgical Out-Clinic. It was the surgeon's impression that the patient's acute distress was primarily of respiratory origin. He concluded that the right lower quadrant mass was a hernia, and then reduced it. Another physician on duty in the surgical clinic made this note at 1600 hrs.: "Hernia reduced, but patient now has severe abdominal pain and generalized tenderness; bowel sounds are heard but diminished; the patient is very dyspneic." At 1745 hrs., the first examiner stated: "Abdomen soft, and he is not complaining of abdominal pain."

Surgical exploration of the abdomen was considered, but thought inadvisable because the patient's general condition was grave. He was then transferred and admitted to the medical service. At 1900 hrs., examination by the medical ward physician revealed a blood pressure of 95/60 mm. Hg., the pulse was 140, the respirations were 40 and the temperature was 104°F. The patient appeared thin, cyanotic and in marked respiratory distress. Many coarse, moist rales were heard over the right lower lung field, and the abdomen was flat and slightly tender. No masses or abdominal organs were palpable. The bowel sounds were present, but very hypoactive.

The urinalysis on admission showed a specific gravity of 1.018, albumin 1+, no sugar and no blood. The hemoglobin was 14 Gm., and the white blood cell count was 12,000/cu. mm. Anteroposterior supine and upright x-ray films of the abdomen revealed an absence of psoas shadow on the right, and an increased density in the right lower quadrant. There were no dilated loops of small bowel, and there was no evidence of free intraperitoneal air. The impression was possible appendiceal abscess. Posterior-anterior and lateral films of the chest showed pulmonary emphysema and pneumonia in the right lower lobe.

The clinical diagnosis was pulmonary emphysema, right lower lobe pneumonitis, right inguinal hernia recently reduced.

The patient was started on the following therapy: oxygen 5 L./min. by nasal catheter; 2,000 cc. 5 per cent dextrose in water intravenously; aminophylline suppositories 0.5 Gm. every 6 hrs.; aqueous penicillin 600,000 units stat; procaine penicillin 600,000 units every 6 hrs. The patient's condition remained unchanged until midnight, when his pulse increased to 180 beats per minute.

He had been taking one Digifortis Kapseal® (0.1 Gm. digitalis leaf) daily for some time. Digitoxin 0.2 mg. was given intramuscularly. An electrocardiogram showed auricular fibrillation with a ventricular rate of 150/min. and complete right bundle branch block. Quinidine 0.4 Gm. every 2 hrs. x 6 doses was ordered. At 0200 hrs. on the next day, the blood pressure was 75/60 mm. Hg., and the pulse was 180. At 0400 hrs., the pulse was 120, the blood pressure was 60/45 mm. Hg. Levophed was started intravenously in an effort

to maintain blood pressure at approximately 100 mm. Hg., systolic. The stomach was aspirated at 0100 hrs., and yielded gas and 250 ml. of coffee-ground material. The stomach tube was left in place and attached to suction.

Later on the second hospital day, the patient was seen by the examiner who had originally seen him in the Surgery Out-Clinic. He reported: "The patient definitely had a hernia in the right lower quadrant yesterday, but does not have it now. There is a suggestion of a deep mass. The bowel sounds are active. There is no rebound tenderness. The abdomen is soft. I do not believe that the patient has peritonitis, abscess or obstruction, although it is possible." On the same day, the medical resident described the physical findings as follows: "Increased anteroposterior diameter of the chest, some rales at the right base, abdomen distended, questionable guarding in the right lower quadrant, liver down three fingerbreadths, no masses felt, right lower quadrant full, point tenderness at McBurney's point, no rebound tenderness." Rectal examination revealed no masses, but there was tenderness high on the right side. Therapy consisted of gastric suction, penicillin, streptomycin, intravenous fluids and intravenous Levophed.

On the third hospital day, the patient was better hydrated, but still quite ill. He needed Levophed at 20 drops per minute to maintain the blood pressure at approximately 100/60 mm. Hg. Respirations were 24 per minute, and not labored. The chest seemed clearer. The abdomen was tight, especially in the right lower quadrant. The liver edge was down three fingerbreadths. On the fifth hospital day, quinidine and Levophed were discontinued, and the blood pressure remained at normotensive levels. On the sixth hospital day, the patient developed a tachycardia of 150. The EKG showed atrial flutter, with 2:1 block. He was given 20 mEq. of potassium chloride. On the seventh hospital day, the blood pressure fell again, intravenous Levophed produced only a transient rise in the blood pressure, and the patient died. Gastric suction had been continued throughout the entire hospital course. The patient had no bowel movements during his hospitalization. His urine output averaged approximately 600 ml. per day.

CLINICAL DISCUSSION

Dr. James A. Clifton, Internal Medicine: I think the first part of this protocol is rather clear. It describes a routine case of pulmonary emphysema. It may be of interest that this man had been a mill hand. Dr. Bedell was careful not to tell us in what kind of mill he had worked, but I presume that it wasn't an asbestos factory. At any rate, with progressive dyspnea, a rather marked weight loss was noted. For those of you who may not be familiar with severe emphysema, I might point out that loss of weight is not infrequent in this condition, and there is no need for our suspecting that some other lesion must have been present to account for it. The patient had a cough, he had signs of emphysema with 2.1 liters of vital capacity, and a chest film was read as normal. He was treated and went home. He received subsequent follow-up visits, and nothing new was noted.

Now, we come down to the meat of the matter. At age 69, he entered the hospital with a complaint of abdominal pain of three weeks' duration. This illness began with a diarrhea that lasted three days. On the second day of diarrhea, he noticed the right lower quadrant pain which has been described to us as sharp, constant, moderately intense and located in the right lower abdomen. It persisted for three weeks, or up to the time of his admission, and during the last week, it was noted, the pain grew worse. I think it is important for us to remember that the pain wasn't crampy in nature, but is said to have been constant and sharp.

During this last week, he had alternating constipation and diarrhea. I don't know the significance of that statement. I was taught in medical school that alternating constipation and diarrhea indicated carcinoma of the colon. This certainly has not proved true in my experience. Most patients whom I see with alternating constipation and diarrhea have their colonic disturbance on the basis of functional or neurogenic distress. I think it is true that many lesions of the gastrointestinal tract can lead to alternating constipation and diarrhea, and it is not particularly suggestive of any one disease. The patient's bowels did, apparently, continue to move up until the time when he was admitted to the hospital, though in a hesitating fashion. When seen by his family doctor, he had a temperature of 102°F. and a white blood cell count that was somewhat elevated.

On admission to this hospital, he had a normal blood pressure and an irregular pulse. His respirations were 25/min. There was limited expansion and hyperresonance of the lungs, and there were diminished breath sounds at the bases. Later, when he was examined by another physician, other significant findings were noted in the right lower chest.

A 2 x 5 cm. mass which was tender and soft was palpated in the right lower quadrant. There was no rebound tenderness, and there were no other palpable masses. Normal bowel sounds were heard, and thus, apparently, he didn't have generalized peritoneal irritation at that time, nor did he have evidence of intestinal obstruction. I looked in vain for some mention of a rectal examination at that point, but I didn't find any. I wonder whether a report of that procedure was omitted for any particular reason.

Dr. George N. Bedell, Internal Medicine: No, the first rectal examination that was done on the patient is recorded and has been included in the protocol.

Dr. Clifton: It was performed on the next day.

We see here that the patient was first examined in the Surgical Out-Clinic. It was the impression of the surgeon that the patient's distress was primarily respiratory in origin. He also concluded that the mass in the right lower quadrant was a hernia, and he reduced it. I am not in the habit of referring to hernias as being located in the right lower quadrant, and it has struck me as peculiar that this physician should have twice described this man as having had a hernia so located. It is difficult to find out precisely where the boundaries of the right lower quadrant are. However, I think that most of us usually consider the right lower quadrant as bounded inferiorly by the inguinal ligament. An inguinal hernia usually presents below this ligament, but occasionally may be found above. What hernias, then, are found in the right lower quadrant? One such hernia occurs at the junction of the linea semilunaris and the linea semicircularis. The linea semilunaris, or Spigelius' line, is at the lateral border of the rectus sheath. I feel some trepidation in attempting an explanation, for there are surgeons here, but I want to tell the internists, who I am sure don't know, that Spigelius' line is a fusion of the aponeurosis of the internal oblique and the transverse abdominal muscles. This line was described by Adriaan van der Spieghel, a Flemish anatomist who lived in the late sixteenth and early seventeenth centuries. A hernia through that line is often called "Spigel's hernia" or Spigelian hernia. Intersecting that line is the linea semicircularis, which is the lower border of the posterior wall of the rectus sheath. Where those two lines join, there is a weak point, and it is there that a Spigelian hernia most often occurs. It is an uncommon hernia. There is a discrepancy in the literature as to whether strangulation is common or uncommon in this hernia. At any rate, this is a lateral ventral hernia which does occur in the lower quadrants.

Reading on in the protocol, we note that at 1600 hrs. another physician in the Out-Clinic saw this patient and stated that the hernia was reduced, but the patient had severe abdominal pain and generalized tenderness, and the bowel sounds were audible but diminished. "The patient is very dyspneic," he added.

An hour and 45 minutes later, the first surgeon saw the patient and stated that the abdomen was soft and that the patient was not complaining of abdominal pain. Abdominal exploration was considered, but it was thought inadvisable because of the patient's general condition, and consequently he was transferred to the Medical Service. The examination at that time revealed that he was obviously worse. His blood pressure was down, and his pulse and his temperature were up. Rales were noted in his lungs. No masses or organs were palpated in the abdomen, and bowel sounds, although present, were quite hypoactive. The urine was not remarkable, and the hemoglobin was 14 Gm. per cent. These findings probably indicate that he had had no bleeding with his diarrhea. The white blood cell count was slightly up.

Some x-rays were taken at that time. Dr. Gillies, will you tell us about them?

Dr. Carl L. Gillies, Radiology: A film taken in 1955 during the patient's first hospitalization demonstrated a hernia in the right inguinal region. The patient had a barium enema, and the barium visualized the terminal ileum. A loop of terminal ileum lay in a right inguinal hernia. Numerous diverticula of the descending colon were also shown.

Another of the films was taken in an upright position to demonstrate whether there were any free air beneath the diaphragm or any fluid levels in bowel. None were present. The films of the chest did show emphysema with pneumonic infiltrates in the right lower lobe. The two flat films of the abdomen demonstrated the gas uniformly distributed in the bowel—more gas than usual, but no evidence of obstruction. The bowel was not distended. In the right lower quadrant, there was an absence of gas which gave the appearance of a mass and which we interpreted as a possible appendiceal abscess.

Dr. Clifton: I was particularly interested in the colon series because it introduces one diagnosis which, I am sure, was suspected by everyone, namely, diverticulitis. It also demonstrated a hernia on the right side—apparently of the inguinal type.

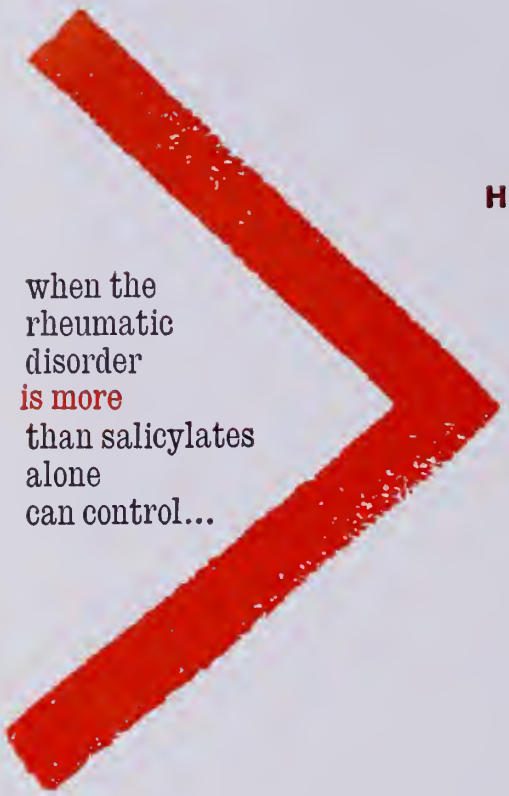
The clinical diagnosis on Medicine at that time was pulmonary emphysema, right lower lobe pneumonitis and right inguinal hernia, recently reduced. The patient was treated with routine therapy for the type of trouble that had been diagnosed. An electrocardiogram revealed auricular fibrillation with a rate of 150 beats per minute, and complete right bundle branch block. The latter could not have been unexpected in view of the long-standing emphysema, with pulmonary artery pressure and right ventricular hypertrophy. Quinidine, digitalis and Levophed were given.

On the second hospital day, the surgeon again saw the patient and was still of the opinion that the hernia was in the right lower quadrant. There was a suggestion of a deep mass, the bowel sounds were active and there was no rebound tenderness. On the same day, the medical resident examined the man and reported findings that were similar except in that he called attention to tenderness in the right lower quadrant near McBurney's point.

Dr. Bedell, is it true that this man had not had an appendectomy?

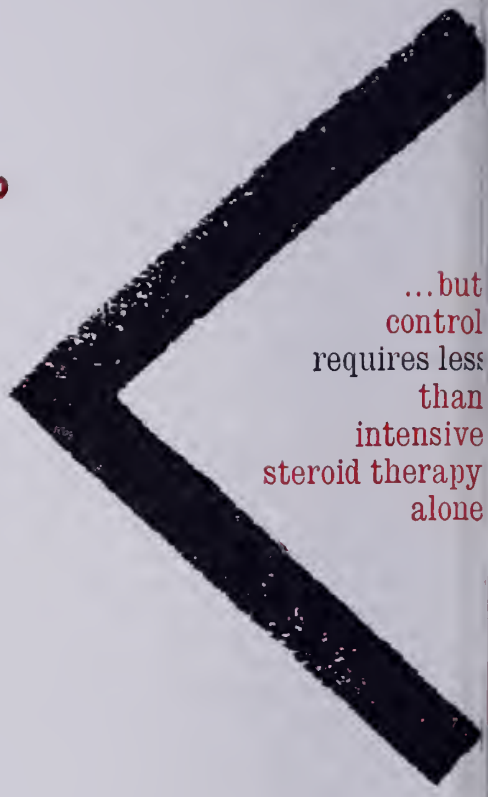
Dr. Bedell: He had not had an appendectomy.

Dr. Clifton: The story of the rest of his hospitalization doesn't help us very much. The abdomen remained tight, particularly in the right lower quadrant, and he had no bowel movements. This might mean that he had an intestinal ob-



when the
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can control...

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HIGHLY INDIVIDUALIZED
THERAPY
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struction, but it could just as easily have been the result of severe illness and constant gastric suction.

We come now to the point where we have to decide what was wrong with this man. As I have said before, I don't think that his pulmonary troubles explain the whole picture. I think that he had an abscess in the right lower quadrant of the abdomen. The physical findings and the x-ray evidence agree on that point. What was causing that abscess? I can see no reason why it couldn't have been appendicitis.

Appendicitis in elderly people is notoriously difficult to diagnose, and I know of no reason why this patient couldn't have had appendicitis with an appendiceal abscess. Diarrhea lasting two weeks can occur in this type of appendicitis with abscess formation. There are many things that favor such a conclusion, and I know of nothing against it.

Diverticulitis is more common on the left side of the colon, and that is where diverticula are more common. However, at times there may be a redundancy of the sigmoid, and the sigmoid may flop over onto the right side, thereby giving us right-sided diverticulitis. The onset of diarrhea the first day, followed by pain and then alternating diarrhea and constipation with continued bowel difficulty, could certainly be diverticulitis.

It could be an isolated diverticulum of the cecum, too. This is a rare condition. Then, one has to think of carcinoma of the cecum with a perforation. We usually think of cecal carcinomas as bleeding, but this man was not bleeding.

Now, we come back to the problem of hernia. Did the patient have a strangulated hernia with necrosis of the bowel wall? Did the reduction of this hernia give rise to an abscess? One reason for our thinking that it didn't is the fact that the abscess undoubtedly was there before he was admitted and therefore before the hernia was reduced. Besides, I think it would be difficult to reduce a hernia that had been incarcerated and partially strangulated for three weeks. Furthermore, the patient didn't have physical or radiographic signs of intestinal obstruction, and thus one would need to postulate that less than the whole bowel wall was strangulated—in other words, that a Richter's hernia was present. We usually think of that as being femoral, but it can occur in any type of hernia including lateral ventral ones.

I shall stick with my original thought on this diagnosis, and say that the resident did see a hernia in the right lower quadrant, and that it was a lateral ventral hernia which he reduced. This hernia was a Richter's type, and there was necrosis of the wall, probably of the terminal ileum. It had been leaking into the abdominal cavity during the two-week period, and an abscess had formed.

I must say, however, that I know of no way to eliminate the possibility of appendicitis.

The cause of death, I would conclude, was shock precipitated by pneumonia, pulmonary insufficiency, cardiac arrhythmia and abdominal sepsis. We have no reason to involve electrolyte disturbance or myocardial infarction. I should say that the autopsy revealed the fact that the patient had pulmonary emphysema with a right lower lobe pneumonia, that he had hypertrophy and dilatation of the right ventricle of the heart, and that he had an abscess in the right lower quadrant of the abdomen due to the lateral ventral hernia.

Dr. Bedell: Thank you, Dr. Clifton.

At this point, we shall call upon one of the students, Mr. Paul Anderson, to give his impression.

Mr. Paul Anderson, Junior Student: After Dr. Clifton's dissertation, it is difficult for me to attempt a diagnosis of my own, or even to elaborate upon what he has said. However, along with the abscess that he thinks was in the right lower quadrant, it is possible that there were emboli originating from there and extending to the liver and producing abscesses there. We do have evidence of an enlarged liver, and therefore this possibility would have to be ruled out.

Carcinoma of the cecum, appendiceal abscess or strangulated hernia seem the most probable diagnoses. There may have been kidney abscesses or an abscess localized to the mesentery and spilling over, causing peritonitis.

Dr. Bedell: The ward service diagnosis at the time of death was appendiceal abscess with peritonitis, emphysema and pneumonia. The family physician's diagnosis was appendiceal abscess, emphysema and pneumonia.

Dr. Jack M. Layton, Pathology: At autopsy, the most striking findings were encountered in the abdominal cavity. A fecal odor emanated from the the peritoneal cavity after the peritoneum had been incised. Omentum was adherent to the large and small intestine, particularly in the right lower quadrant, and subjacent to this area an ill-defined mass was palpated. After the greater omentum had been dissected free from the area, the underlying mass was found to be composed of conglutinated loops of ileum held together by fibrinopurulent exudate and newly formed fibrous adhesions. When these loops of intestine were separated, a cavity lined by a thick, shaggy, greenish-black membrane, and filled with feces and pus, presented about the ileocecal area. About 200 ml. of pus was aspirated from the cavity.

The vermiform appendix, being completely necrotic, was not visualized as such in the abscess. A probe passed into the appendiceal stump from the lumen of the cecum presented in the center of the cavity.

The entire peritoneal surface was opaque, dull and rough, being covered with serofibrinous and fibrinopurulent exudate.

Another 300 ml. of turbid, reddish-yellow fluid was aspirated from the cul-de-sac. Small collec-

tions of similar fluid were noted in the left pericolic gutter and adjacent to the spleen.

The spleen was about twice normal size (280 Gm.). It was soft, was deep red and had fibrinopurulent exudate on the surface with adhesions to the diaphragm.

Bilateral inguinal herniorrhaphy scars were present and well healed. Apparently, the fact that hernias had been repaired failed to get into the protocol, and it is no wonder that Dr. Clifton was confused.

Significant anatomical lesions were found in the thorax, too. The anteroposterior diameter of the chest was increased, and old fibrous pleural adhesions were present on the right. Both lungs were enlarged, contained more air than normal, and had the consistency of an "air cushion" in the upper lobes, but were firmer in the lower lobes. The upper lobes were dry, with many bullae on the surface, whereas the lower lobes were moist, reddish-purple and smooth. There was no evidence of pneumonia at autopsy. The pneumonia which the patient had had when he was admitted and which was visualized in the x-ray films had apparently been cured by the antibiotics. The trachea and bronchi contained light gray mucoid material, and there was evidence of chronic bronchitis as well as emphysema. The heart was enlarged to a mild degree, the right ventricle being hypertrophied more than the left. Two foci of atheromata produced narrowing of the anterior descending branch of the left coronary artery. The valve rings were of normal sizes, but some small calcific deposits involved the leaflets of the aortic valve. The aorta presented moderate atherosclerosis.

Other findings included evidence of poor nutritional status, surgical absence of the right breast, arteriosclerosis of kidneys and hemorrhagic cystitis.

We felt that this was a man who had had chronic bronchitis for years, had developed pulmonary emphysema and had come under treatment for that condition. He had bilateral inguinal hernias that were repaired, and he had no more trouble with them. He developed acute appendicitis with the complication of an appendiceal abscess which was being walled off. Reduction of the mass initiated diffuse peritonitis, he went into shock and had cardiac irregularities, and with the sepsis plus the cardiac and pulmonary difficulties, he died.

The case is really a tragedy, rather than a fabricated mystery. I know that there are some things on the record that didn't get into the clinical protocol. Perhaps Dr. Bedell will draw us a diagram showing the location of the mass that was noted in the chart at the time the patient was admitted.

Dr. Bedell: It was described as being here in the right lower quadrant, and I think it was the surgeon's impression that it was a Spigelian hernia.

Dr. Layton: The place that has been indicated is not the one at which a Spigelian hernia would occur. This man did have bilateral hernias which had been repaired and were well healed.

I should like to know from one of the surgeons how often a hernia is likely to occur through another aponeurosis after the inguinal defects have been repaired. It is my impression that if a hernia recurs it usually recurs locally, and that it is very uncommon for hernial weaknesses to occur in other sites in the wall, but I am not sure. As Dr. Clifton mentioned, this man did have atypical signs—ones that are typical in the elderly. We need to have our memories jogged again on this point. Another thing that disturbs me is that the referring physician had diagnosed appendicitis—a very logical diagnosis from what was known—and then all of a sudden someone made a very uncommon diagnosis upon finding a mass in a place where the lesion that he suspected doesn't occur.

Dr. Bedell: There are several clinical problems that are important. First of all, appendicitis can be an extremely atypical disease, especially in elderly individuals. I think we should have some discussion of this point. Second, if an individual presents with a mass that is presumed to be a hernia (and this time let's assume that it is in a correct place for a hernia), and if the patient has been ill for three weeks, should the mass be reduced immediately or not?

Dr. S. E. Ziffren, Surgery: First of all, a Spigelian hernia is quite rare. We are fortunate if we see such a hernia once a year. If a hernia is going to recur, it usually does so at the site of the repair. Frequently, of course, there is a weakness above the hernial repair site, and the patient gets a new hernia. Ordinarily, it is quite easily recognized.

What is disturbing to me about this whole affair is that the protocol reads like a "typical" record of appendicitis in an old man. I know that it differs from the textbook picture, but if one rereads the history, he will find points that are typical of the course of appendicitis in an aged person. For one thing, we know from experience that individuals who do get an acute appendicitis when they are old frequently start out with symptoms that are not even associated with the intestinal tract. They may have malaise; they may be anorexic; they may even have backache; they are often constipated. Not infrequently, a diarrhea is present, or alternating diarrhea and constipation. Being old, they take a great many remedies. I don't see that any were mentioned here, but they often take laxatives. The disease is of much longer duration than it is when first seen in a young person. There is marked disparity, therefore, between the symptoms presented and the violence of the pathologic process that takes place within the abdomen. Such patients are often much less sensitive to pain in the abdomen than are younger individuals. Whether this has something to do with changes in nerve threshold, I don't know, but this is an old

clinical observation. Here you have a man who has been sick for three weeks with abdominal pain in the right lower quadrant. In anyone in his age group who has had abdominal pain for three weeks in the right lower quadrant, the most likely diagnosis is acute appendicitis. In this connection, I might say that in this country the mortality rate from acute appendicitis today is much higher in the older age groups than it is in the teenage groups where appendicitis is much more common. I don't believe there is any question that acute appendicitis is much harder to diagnose in elderly people.

This patient had a fever. This is something that most aged patients with acute appendicitis don't have. Even if they have an appendiceal abscess, they don't necessarily have fever. They often don't have an elevated white blood count. At least on our service, it is not uncommon to see a patient enter with an abdominal mass and absolutely deny having experienced any kind of symptoms previously. Nevertheless, he has a lump in his side. It is not tender, and he denies that it was ever tender. The first impression, of course, is that he is suffering from a malignancy of the cecum, and the radiologist does a barium enema but can't tell you whether it is a malignancy or an appendiceal abscess. Even at the time of operation, we sometimes can't tell, and thus we do a resection and find after the specimen has been examined that it was truly an appendiceal abscess.

There is something else in this protocol that I think we must guard ourselves against. We are told that surgical exploration of the abdomen was considered and decided against because the patient's general condition was grave. I don't know the exact time relationships, but apparently 1¾ hrs. after his abdomen presumably was soft and the patient was not complaining of abdominal pain, his condition was suddenly too poor for exploration.

If the suspicion arises—and it certainly should have arisen in this instance—that the reason for the patient's grave condition was that something had happened within his abdominal cavity, a true abdominal catastrophe, then an indication existed for doing something for him. He obviously should have been given blood transfusions rapidly so as to put him in better condition for an operation. Perhaps all that could have been done was to drain the abdomen. I don't know. Often that is all one can do to an appendiceal abscess, and the patient is then treated with wide-spectrum antibiotics. Later on, six weeks or so after recovery, we proceed to remove the appendix.

In this connection, if a patient enters with a mass in the right lower quadrant, and one can't decide whether it is an appendiceal abscess or a carcinoma but the suspicion lingers because the radiologist can't distinguish it, there is nothing wrong with treating the patient with a wide-spectrum antibiotic for a week to see what happens. If the mass disappears, the question is resolved. It was an appendiceal abscess. If, however, it doesn't, then one should certainly assume that it is a malignancy and operate on the patient.

If this had been a hernia, reduction *en masse* was a dangerous thing to do if the hernia had been out for any length of time. Certainly if it has been out three weeks, one doesn't make zealous efforts to reduce the hernia. The thing to do is to operate on the patient as soon as possible. Not infrequently, the patient doesn't have generalized peritonitis from a strangulated hernia, for the hernia is separated from the general peritoneal cavity, and the necrotic process has not extended into it, primarily because of the manner in which the hernia is situated and because of its protective membranes. But if you try to squeeze one of these back into the abdominal cavity, you are creating real trouble, for the patient may develop a generalized peritonitis, and you have markedly increased the risk to him.

This is astonishing. A man palpated a mass and ruptured an appendiceal abscess, spreading pus through the peritoneal cavity, but didn't realize that he had done such a thing. It is uncommon, of course, to be able to squeeze such an abscess, but I can see how someone who was eager to reduce such a hernia might have done so. It is not unknown that an abscess should rupture spontaneously within the peritoneal cavity. Granted that it is rare, but it does occur.

Dr. Elmer L. DeGowin, Internal Medicine: Would you mention the incidence or rate of occurrence of abdominal hernia in people with severe pulmonary emphysema?

Dr. Ziffren: As one grows older, the elastic tissues and other connective tissues change in character, and a man may reach the age of 50 or 60 and display a hernia though he never has had one before. In this age group, if emphysema occurs, along with the efforts that accompany it such as violent coughing, I see no reason why the incidence of hernia should not be increased. I don't know any statistics on this particular problem, however.

Dr. Clifton: I looked up this point about hernia and emphysema in several textbooks, and I could find no figures. Yet, the statement is frequently made that there is an increased incidence of hernia in emphysema.

Dr. Ziffren, I don't know whether or not you mentioned anything about appendiceal abscesses presenting themselves as rectal masses, but the importance of this possibility has been forcibly impressed upon me during the past year and a half. I've seen two patients in this hospital, both of whom expired with the diagnosis of rectal shelf carcinoma, and both of whom, in fact, were cases of perforated appendix that drained into the pelvis. A large, hard, irregular mass was felt—one which, from all indications, was carcinoma. I should like to ask you about the fact that this

abscess was described as being soft. It would seem to me that it would more likely have been hard.

Dr. Ziffren: It is true that frequently abscesses present in the pelvis. Ordinarily, however, the history gives some clue, but one must make an effort to obtain the history and inquire into it. The patient may have a fever. He may have tenderness. I don't associate Blumer's shelf with an abscess, for I personally have never encountered one that I thought was a Blumer's shelf, or *vice versa,* but I can see that someone might ask whether it isn't possible to confuse the two.

An abscess has a resilient body—a feeling of giving way and yet not doing so. An abscess is not hard, and it is not soft. It is in between, having its own peculiar character, particularly when bowel is surrounding it. In addition, it almost invariably is tender, and a bogginess is felt by the finger.

Dr. Layton: If you can picture a thin man, with a thin abdominal wall and some soft, fatty omentum just beneath and with some conglutinated ileum that contains air overlying the real mass which is still deep, I think you will see that the mass might have been relatively soft in this instance. All appendiceal abscesses don't necessarily have the air-containing ileum and mass of omentum arranged in just this way. I think that in this particular case it may have been soft.

Dr. Ziffren: The patient doesn't necessarily have to show any signs that an overwhelming process is going on within his abdomen. He may not display any tenderness or rigidity. This is an overwhelming process, and it is the reason why the patient's blood pressure dropped and he required Levophed. One must always be suspicious, in giving Levophed, that he isn't covering up his own mistake or someone else's.

Dr. John A. Gius, Surgery: What do you think about the hernia? Was it actually the abscess—misdiagnosed as a hernia—that was squeezed?

Dr. Ziffren: That's right. I think that the mass was mistaken for a hernia, that it was squeezed in an effort to reduce it, and that the mass ruptured and consequently disappeared.

Dr. Bedell: We learn more from our mistakes than from our correct diagnoses. In trying to reconstruct how things went wrong, I think it is fair to say that the surgeon who reduced the "hernia" reached a conclusion too quickly and tried to do something about it too rapidly.

The thing which should be emphasized is that if the history and physical examination had been done carefully and in detail by the responsible surgeon, the correct diagnosis would probably have been reached. The family physician had the correct diagnosis. The first doctor who saw the patient in the Surgical Out-Clinic took a careful history and did a careful physical examination, and it was his impression that the patient had acute appendicitis with an appendiceal abscess. We try to teach people to attack problems in this way—to consider the history carefully, to review the physical examination and the laboratory studies, and then to reach a decision based upon all of this evidence together.

ANATOMICAL DIAGNOSES

1. Acute gangrenous appendicitis with pericecal abscess
2. Generalized peritonitis
3. Pulmonary emphysema, upper lobes, bilateral, severe
4. Pulmonary congestion, lower lobes, bilateral
5. Myocardial hypertrophy and diffuse fibrosis
6. Atherosclerosis, left coronary artery, aorta and renal arteries
7. Inguinal herniorrhaphy scars, bilateral, well healed.

DIRECTORY OF BLOOD TRANSFUSION SERVICES

Informational material and specific data for 1959 are now being gathered from all hospitals and blood banks in the United States and territories by the Joint Blood Council, and the compilation will be published early next spring in a new directory of blood transfusion facilities.

The first directory produced by the Council covered the year 1956 and included 2,202 facilities which collect, process, distribute or use whole blood.

Technical and operating procedures of blood banks and hospital transfusion services, as well as sources and usage of blood, are to be recorded. Also included will be approvals, supervision, reciprocity exchange systems and other services such as tissue storage banks. This information has been found useful to hospitals, blood banks, medical libraries and federal medical agencies.

The forthcoming directory will list hospitals using blood as well as hospital blood banks, Red Cross centers and community blood banks which collect, process and distribute it. All facilities are requested to complete the directory cards and return them immediately.

LAW-SCIENCE WEEK IN HOUSTON

The Law-Science Academy and Institute will present two successive short courses at the Shamrock Hotel, Houston, during the week of February 15-20, 1960. The organizer and director is Hubert Winston Smith, LL.B., M.D., professor of law and legal medicine at the University of Texas.

The medical topics that will be taken up include head injuries; pain, suffering and mental anguish; and stress. It is the legal implications of those conditions that will be considered, of course. In addition, several sessions will be devoted to medicolegal trial techniques, and to the medicolegal implications of surgical terminology and concepts. The fees are $25 for one day; $60 for three days; and $120 for six days.

Coming Meetings

In State

Feb. 16-19 **Refresher Course for the General Physician.** SUI College of Medicine, Iowa City

Feb. 23-25 **Sixty-Fourth Annual Meeting, Sioux Valley Medical Association.** Sheraton-Martin Hotel, Sioux City

Out of State

Feb. 1-3 **The 1960 Blue Shield Professional Relations Conference.** Drake Hotel, Chicago

Feb. 1-5 **Clinical Congress of Abdominal Surgeons.** Deauville Hotel, Miami Beach

Feb. 3-6 **American College of Radiology.** Roosevelt Hotel, New Orleans

Feb. 4 **Bedside Cardiology.** University of Southern California, Los Angeles

Feb. 4-5 **Regional Postgraduate Institute (West Coast Counties in cooperation with University of California).** Del Monte Lodge, Pebble Beach

Feb. 4-5 **Respiro Cardiac Resuscitation (The American College of Cardiology).** New York City

Feb. 6-7 **American College of Physicians Annual Southern California Regional Meeting.** Hotel del Coronado, Coronado

Feb. 6-7 **Los Angeles Obstetrical and Gynecological Society Forum.** Ambassador Hotel, Los Angeles

Feb. 7-9 **Congress on Medical Education and Licensure.** Palmer House, Chicago

Feb. 8-10 **Cardiovascular Diseases for General Physicians and Specialists.** Center for Continuation Study, University of Minnesota

Feb. 8-10 **Radiology & Radioactive Isotopes.** University of Kansas School of Medicine, Kansas City

Feb. 8-12 **Fifteenth Annual Mid-Winter Clinical Assembly, Obstetrical and Gynecological Assembly of Southern California.** Ambassador Hotel, Los Angeles

Feb. 8-12 **Recent Advances in Metabolic Diseases, American College of Physicians.** Blumenthal Auditorium, Mount Sinai Hospital, New York City

Feb. 9-12 **Mid-South Postgraduate Medical Assembly.** Peabody Hotel, Memphis

Feb. 10-12 **American Academy of Occupational Medicine.** Williamsburg Inn, Williamsburg, Va.

Feb. 11 **The Ophthalmoscope: Its Use in Medicine.** University of Kansas School of Medicine, Kansas City

Feb. 11-13 **Society of University Surgeons.** Minneapolis

Feb. 12-13 **Annual Clinical Conference, Chicago Ophthalmological Society.** Drake Hotel, Chicago

Feb. 12-13 **The Back: A Law-Medicine Problem Reappraised (The Law-Medicine Center of Western Reserve University).** Hatch Auditorium, Western Reserve University, Cleveland

Feb. 13-14 **Arizona Academy of General Practitioners and Arizona Psychiatric Association Psychiatric Seminar.** Phoenix

Feb. 15-17 **Law-Science Academy and Foundation Short Course (The Law-Science Institute, University of Texas).** The Shamrock Hotel, Houston

Feb. 15-19 **Pediatric Neurology for Specialists.** Center for Continuation Study, University of Minnesota

Feb. 16-18 **National Association of Methodist Hospitals and Homes.** Deshler Hilton Hotel, Columbus

Feb. 18-20 **Law-Science Institute Short Course (The Law-Science Institute, University of Texas).** The Shamrock Hotel, Houston

Feb. 18-20 **Alaska State Medical Association.** Anchorage

Feb. 18-20 **Central Surgical Association.** Drake Hotel, Chicago

Feb. 21-23 **Infectious Diseases (California Medical Association).** Ambassador Hotel, Los Angeles

Feb. 21-23 **Minor Surgery (California Medical Association).** White Memorial Hospital, Los Angeles

Feb. 21-23 **Clinical Endocrinology (California Medical Association).** Los Angeles County Hospital and Ambassador Hotel, Los Angeles

Feb. 21-24 **Annual Meeting Pacific Coast Surgical Association.** Palm Springs

Feb. 21-24 **Annual Meeting California Medical Association.** Ambassador Hotel, Los Angeles

Feb. 22-26 **Hematology.** University of Kansas School of Medicine, Kansas City

Feb. 24-27 **Diagnostic Cardiac Auscultation.** The New York University Post-Graduate Medical School, New York

Feb. 25-27 **American Orthopsychiatric Association, Inc.** Sherman Hotel, Chicago

Feb. 25-27 **Symposium on Fundamental Cancer Research.** University of Texas, Houston

Feb. 25-March 5 **Special Clinical Postgraduate Course in Anesthesiology, Gastroenterology, Dermatology, Cardiology, Pediatrics, and General Surgery (UCLA and University of Mexico).** UCLA Medical Center, Los Angeles

Feb. 26-27 **Virginia Pediatric Society.** White Sulphur Springs, West Virginia

Feb. 28-March 3 **Annual Alumni Postgraduate Convention, Alumni Assn. of the School of Medicine (College of Medical Evangelists).** White Memorial Hospital and the Ambassador Hotel, Los Angeles

Feb. 28-March 4 **Sixteenth Congress and Graduate Instructional Course in Allergy (The American College of Allergists).** Americana Hotel, Bal Harbour, Miami Beach

Feb. 28-March 5 **American College of Allergists, Inc.** Americana Hotel, Bal Harbour, Miami Beach

Feb. 29-March 2 **Pediatrics for General Physicians.** Center for Continuation Study, University of Minnesota

Feb. 29-March 3 **American College of Surgeons, Four-Day Sectional Meeting for Surgeons and Nurses.** Statler-Hilton and Sheraton-Plaza, Boston

March 1-2 **Southwestern Pediatric Society Spring Lecture Series.** Statler Hotel, Los Angeles

March 1-4 **Annual Clinical Conference, Chicago Medical Society.** Palmer House, Chicago

Mar. 2 **Ketosis Symposium.** Presbyterian-St. Luke's Hospital, Chicago

March 2-7 **American Urological Association, S. E. Section.** Jacksonville, Florida

March 3-5 **American Academy of Forensic Sciences.** Drake Hotel, Chicago

March 3-April 21	**Clinical Physiology: Applications of Basic Physiology to Diagnostic and Therapeutic Problems (The New York University Post-Graduate Medical School).** New York University
March 6-13	**American Otorhinologic Society for Plastic Surgery, Inc.** Deauville Hotel, Miami Beach
March 7-9	**Pediatrics.** University of Kansas School of Medicine, Kansas City
March 7-10	**New Orleans Graduate Medical Assembly.** The Roosevelt Hotel, New Orleans
March 7-11	**Course for Physicians in General Practice.** University of California, Mount Zion Hospital, San Francisco
March 7-11	**Traumatology.** UCLA, Los Angeles
March 7-12	**Motor Anomalies of the Eye (The New York University Post-Graduate Medical School).** Part I—New York University, New York City
March 7-18	**Medical and Public Health Control of Ionizing Radiation.** NYU-Bellevue Medical Center, New York City
March 8	**National Multiple Sclerosis Society.** New York City
March 11	**Symposium on Hypertension.** University of Southern California, Los Angeles
March 11-13	**Annual Meeting of the American Society of Psychosomatic Dentistry and Medicine.** Shoreham Hotel, Washington, D. C.
March 13-14	**American Otological Society.** Deauville Hotel, Miami Beach
March 13-16	**Missouri State Medical Association.** Sheraton-Jefferson Hotel, St. Louis
March 13-18	**National Health Council, National Health Forum.** Miami
March 14-16	**Internal Medicine for Internists.** Center for Continuation Study, University of Minnesota
March 14-18	**Motor Anomalies of the Eye (The New York University Post-Graduate Medical School).** Part II—New York University, New York City
March 14-18	**Thirteenth Annual Postgraduate Course on Diseases of the Chest (Council on Postgraduate Medical Education of the American College of Chest Physicians).** Sheraton Hotel, Philadelphia
March 14-18	**Arthritis and Related Disorders—For the Experienced Clinician and Research Worker.** Bellevue Medical Center, New York City
March 14-19	**Electrocardiography.** The New York University Post-Graduate Medical School, New York City
March 15-16	**American Broncho-Esophagological Association.** Deauville Hotel, Miami Beach
March 15-17	**American Laryngological, Rhinological and Otological Society, Inc.** Deauville Hotel, Miami Beach
March 16-20	**Diagnostic Radiology.** University of California, San Francisco
March 17-19	**American Radium Society.** Caribe Hilton Hotel, San Juan, Puerto Rico
March 17-19	**International Symposium on "The Blood Platelets."** Henry Ford Hospital, Detroit
March 18-19	**American Laryngological Association.** Deauville Hotel, Miami Beach
March 19	**Trauma for General Physicians.** Center for Continuation Study, University of Minnesota
March 21	**Pulmonary Disease.** University of Kansas School of Medicine, Kansas City
March 21-23	**American College of Surgeons, Sectional Meeting.** The Broadmoor, Colorado Springs
March 21-23	**Refresher Course in Allergic Conditions.** NYU-Bellevue Medical Center, New York City
March 21-24	**Southeastern Surgical Congress.** Roosevelt Hotel, New Orleans
March 21-24	**The American Academy of General Practice.** Philadelphia's Convention Hall, Philadelphia
March 22	**Gastroenterology.** University of Kansas School of Medicine, Kansas City
March 23	**Psychiatry.** University of Kansas School of Medicine, Kansas City
March 24	**Dermatology Clinic One-Day Symposium.** University of Southern California, Los Angeles
March 24	**Neurology and Neurosurgery.** University of Kansas School of Medicine, Kansas City
March 24-26	**Adrenal Steroids.** University of Oklahoma Medical Center, Oklahoma City
March 24-26	**American Association for the History of Medicine, Inc.** Charleston
March 25	**Endocrinology and Metabolism.** University of Kansas School of Medicine, Kansas City
March 26	**American Psychosomatic Society.** Sheraton-Mount Royal Hotel, Montreal, Canada
March 26-27	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Frances Marion Hotel, Charleston
March 28-30	**American College of Surgeons, Sectional Meeting.** Sheraton-Portland Hotel, Portland, Oregon
March 28-31	**Southwestern Surgical Congress.** Riviera Hotel, Las Vegas
March 28-April 1	**Endocrinology for General Physicians.** Center for Continuation Study, University of Minnesota
March 28-April 2	**Surgery of the Eye (The New York University Post-Graduate School).** New York University
March 29-30	**Decennial U.S.P. Convention.** Statler Hilton Hotel, Washington, D. C.
March 30	**American Gastroscopic Society.** Roosevelt Hotel, New Orleans
March 30-April 2	**Neurosurgical Society of America.** Del Monte Lodge, Del Monte, California

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines



PHYSICIANS' CAMPAIGN AGAINST THE FORAND BILL

Socialized medicine is no less likely to be enacted this year than it was in 1950, when physicians and other believers in free enterprise achieved the defeat of the Wagner-Murray-Dingell Bill, and the AMA is calling for the full-scale efforts of every doctor and every doctor's wife in what must be, for now, a crash campaign against it. The Forand Bill, under which the federal government would provide hospital and surgical benefits to all Old Age and Survivors' Insurance benefit recipients, would serve as an opening wedge for the eradication of the entire private health insurance industry and the entire private practice of medicine, and if it is passed at all this year, it will be passed within the next five months.

The broadening of Social Security benefits is something that congressmen find attractive to do, especially in an election year, for by that means they can give something to very large numbers of voters without involving a rise in the taxes for which the legislative branch of the government is ordinarily held directly accountable. The congressmen will take a strong stand against the Forand Bill only if they are convinced that really substantial numbers of their constituents oppose it. Since the current session of Congress is certain to adjourn early in June, just prior to the first of the national party conventions, the doctors' opposition must be expressed *now*, not a month or six weeks from now, or whenever they can get around to it!

A FLOOD OF RESOLUTIONS AND PERSONAL LETTERS IS NEEDED

Throughout the United States, the AMA is calling for action by local medical societies and Auxiliaries, and by individual doctors and doctors' wives.

Each medical society and each Auxiliary should adopt a resolution opposing the Forand Bill and forward copies of it to the U. S. senators from Iowa, to the congressman from its district, Chairman Wilbur Mills, of the House Ways & Means Committee, and to the Iowa State Medical Society office. Furthermore, each county medical society and Auxiliary should utilize the recently-issued kit entitled "Aging Is a Community Responsibility" in getting local civic organizations, and other clubs and associations, to do likewise.

Then, each individual doctor and Auxiliary member should write a personal letter to his or her congressman and senators in Washington, outlining the progress that is being made in providing health care for the aged in Iowa and pointing out the dangers inherent in any and every expansion of government medicine. In addition, each doctor and doctor's wife should persuade as many friends as possible to write similar letters.

The AMA's goals are (1) to get an anti-Forand resolution from every single medical society and Auxiliary in America; (2) to persuade every doctor and every Auxiliary member to write letters to congressmen and senators; (3) to get resolutions from no fewer than 10 or 15 non-medical organizations in each county throughout the land; (4) to prompt the publication of anti-Forand editorials in all local newspapers; and (5) to prompt non-medical people to write letters to congressmen and senators opposing the current socialized-medicine proposal. Mr. Gerald Buckles, of the ISMS staff, has been relieved at least temporarily of some of his duties as field secretary at the state level so that he may serve, on this project, as AMA field consultant in the states of Iowa and Minnesota.

Numerous other organizations will exert their full efforts in this work. For example, the insurance agents will be urging their friends to write letters to Washington. The reason for their concern was summarized recently in the following statement by Mr. Orin Pritchard, president of the National Association of Life Underwriters: "The Forand Bill, if passed, would wipe out private accident and health insurance within 10 years, and then in turn, the federal government would undoubtedly further invade private life insurance as we know it today."

THE FORAND BILL ISN'T WHAT IT PURPORTS TO BE

The Forand Bill is being urged as a means of providing health care for the elderly people of this country who are least able to pay their own way, but it is nothing of the sort. The indigent elderly aren't Old Age and Survivors' Insurance beneficiaries at all. The indigent elderly are people who never have worked long enough in covered occupations to acquire eligibility for that program. According to the Iowa office of the Social Security System, only 54 per cent of Iowans over 65 are currently drawing OASI benefits. What the proponents of this Bill want is a start toward the socialization of medicine and indeed of the entire American economy, and they will indulge in any and every deception to secure it, believing that the end justifies the means.

Government medicine would quickly become far more expensive than the backers of the Forand Bill are predicting. During the first year or two, the cost would approximate $2,000,000,000 per year, but then it would sky-rocket, just as it has done in Britain.

Social Security taxes, both for employee and employer, took a new jump the first of last month.

According to present plans—ones that have been revised upward several times already and are likely to be raised again—Social Security taxes eventually will reach 9 per cent, even without hospital-surgical benefits. In Italy, the tax for the support of social security now amounts to 35c out of every payroll dollar!

THE VOLUNTARY WAY IS FAR SUPERIOR

Voluntary health insurance is making tremendous progress through expanding coverage and is providing broader protection. According to the Health Insurance Association of America, 60 per cent of our senior citizens who need and want health insurance will have protection by the end of 1960. Further, that percentage will increase until three-quarters will be covered in 1965, and 90 per cent in 1970. The remainder are people whose health needs always have been, are now and always will be a responsibility for private charity and the dole. Further, voluntary effort at the community level is rapidly expanding and developing special facilities for the health care of the aged. These include home care programs, day hospital service, homemaker services, progressive patient care and new concepts for treatment through outpatient departments of hospitals and through doctors' offices. The Forand Bill would discourage such experimentation, for it is at the community level that these innovations can best be made to work.

Most important of all, the Forand Bill would result in poorer, rather than better, health care for the people of this country. Medical care is not susceptible to production-line technics. Medical needs of the aged are subject to countless variations, and any workable system of federally financed care cannot be tailored to meet them.

It would mean red tape, bureaucratic control and delays. Hospitals, as has been the experience in Britain, would be even more crowded than they are now, and whether or not a patient were admitted promptly could easily come to depend upon his politics rather than upon his medical needs. Furthermore, government control would almost certainly restrict the physician's management of individual cases. In many instances, the government's convenience would necessitate his prescribing a second or third choice drug, or omitting tests which he thought should be performed.

These are probabilities that each of us must take pains to point out to the lawmakers, and the time to do that pointing out is now!

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines

MEDICARE, AFTER THREE YEARS

December 7, 1959, marked the third anniversary of Medicare, and as of that date it had expended more than $200,000,000 for civilian medical and hospital services to 800,000 dependents of military personnel. (Physicians have received 51 per cent of the outlay, and hospitals 49 per cent.) Together, military and civilian hospitals have cared for nearly 2,000,000 cases in the past three years. But impressive as these figures are, they will be eclipsed in the next three-year period, according to Brig. Gen. Floyd Wergeland, executive director of the Office for Dependents' Medical Care.

In the current fiscal year, Medicare spending will approximate $67,000,000, General Wergeland told the AMA-sponsored Medical Services Conference held during the recent AMA clinical meeting in Dallas. Costs will go up to $82,600,000 next year, beginning July 1, 1960, in part as a result of the reinstitution of liberalized benefits on January 1. Projections to 1964 indicate an uninterrupted curve upward because a larger proportion of servicemen will be married, family sizes are rising and so is the enlistment rate. The marital rate was 41.7 per cent in 1955 and 51.4 per cent in March, 1959. It is expected to be 55 per cent in 1964. The number of children per family rose from 1.27 in 1956 to 1.61 this past year, and it is expected to reach 1.75 in 1964.

Dependent wives and children will total 3,780,000 in 1964, an increase of 240,000 over the number eligible for Medicare benefits last March, General Wergeland believes. He told the Conference that a requirement of 850,000 hospital admissions by 1964 is probable.

"Basically," he said, "it is our thought that uniformed service hospitals will continue to care for dependents of active-duty servicemen at about their present level, while the civilian physician-hospital team will supply an increasing fraction of the total dependent care required. This assumes, of course, that the Congress both approves this basic philosophy and appropriates money to pay for the program."

Civilian hospitals and civilian physicians will give an increasing share of medical and surgical services to military dependents in the years to come, the speaker said. "After showing the facts in detail, especially the certainly increasing demend for care for retired personnel, we conclude that service hospitals will not be in a position to expand their capacity for serving dependents of active-duty personnel beyond their current optimum figure of 427,000 admissions a year.

"At present, service optimum capacity for dependents of active-duty personnel is somewhere in the neighborhood of 60 per cent of the overall

requirement. Within the next few years, although remaining constant in absolute terms, service hospital capacity for handling these dependent cases will probably fall to 50 per cent or less of the total requirement.

"Perhaps we have been somewhat behind in our planning, but we are initiating remedial action at this time and, by so doing, we may in some small way set a good example for many civilian communities that are confronted with a similar problem."

SUBCUTANEOUS EMPHYSEMA

The significance and importance of subcutaneous emphysema in chest conditions is often misunderstood, particularly if it is of considerable magnitude. This entity, when seen, almost always follows either rib fracture with lung puncture, rupture or perforation of the esophagus or major bronchus, or perforation of the chest wall with creation of a "sucking" mechanism.

A rib at the moment of fracture will more than likely tear the adherent parietal pleura. If the broken rib also punctures the lung, a pneumothorax of greater or lesser extent results. The pleural air then has egress to the subcutaneous planes because of the parietal pleura disruption. Chest motion tends to draw the air into this false passage. If the pneumothorax is slight and without tension, the subcutaneous emphysema will be minimal. If the pneumothorax is progressive and under tension, the subcutaneous emphysema may be awesome.

A rupture of the esophagus, trachea, or major bronchus will permit the escape of swallowed or inhaled air into the mediastinum, and by way of the apex of the thorax into the subcutaneous tissues.

A perforating wound of the chest wall (either operative or traumatic) will at times allow chest motion to draw environmental air or intrapleural air into the subcutaneous planes.

In any of these situations, the subcutaneous emphysema itself represents no dangerous or life-threatening complication. The concept is to some extent prevalent that a large quantity of air beneath the skin endangers life. This concept is erroneous. On the contrary, the escape of air into the subcutaneous tissues may serve as a life-saving decompression of intolerable intrapleural pressure.

The decisive importance of subcutaneous emphysema is that it calls attention to the basic problem: the lung rupture, esophageal rupture, or chest wall perforation. The precise identification of the source of air-leak is sometimes extremely difficult, but the detection and correction of this source constitutes the sole therapeutic problem. Extensive subcutaneous emphysema, even if so great as to distort the patient beyond recognition, does not require measures directed toward the emphysema, but does dictate urgency in "damming" the leak at its point of origin.

DEAN'S COMMITTEE FOR BROADLAWNS

At a special meeting held in Des Moines on January 6, the Polk County Medical Society decided to ask Dr. Norman B. Nelson, of the S.U.I. College of Medicine, to appoint a dean's committee, like the ones that have proved valuable in the operation of Veterans Hospitals throughout the country, to function in a similar capacity for Broadlawns-Polk County Hospital, Des Moines.

Dean Nelson subsequently appointed the following to compose the committee: Dr. Lee Forrest Hill (chairman), Dr. Joseph B. Priestley, Dr. Herman J. Smith and Dr. Bernard C. Barnes, all of Des Moines, and Dr. R. T. Tidrick, professor and head of surgery, and Dr. Lewis E. January, professor of internal medicine, of the S.U.I. College of Medicine.

The discussion at the meeting had to do with the interne and resident training programs, and with measures which might be taken to improve the quality of medical care rendered at the Hospital.

Letter to the Editor

Dear Sir:

As a member of the House of Delegates, I attended the recent [November 8] special legislative meeting in Des Moines. It was interesting and informative, and pointed up the need for vigorous, concerted action against the forces and philosophy which move us deeper into socialism.

As a part of our more vigorous defense, I think we should stop apologizing. In the name of good public relations, we have, on a number of occasions, acted quickly and almost guiltily when some group or other began shooting at us. We are reminiscent of a Russian bureaucrat who has guessed wrong and seeks to cleanse himself by abjectly confessing to all sorts of wrong-doing, even though such confession may jeopardize his liberty or even his life.

A case in point was our hurried and ill-advised adoption of the over-65 Blue Shield plan. By such precipitous action, we confessed that we were in the habit of charging too much and were shamefacedly trying to square things before the threatening Forand Bill forced us to mend our ways. We should have demanded proof that the indigent elderly were suffering for medical care because they could not afford the exorbitant fees. We should have pointed out that the savings of the elderly were being nibbled away by the inflation which followed the deficit spending and high taxes so dear to the hearts of the socializers. Finally, this admission that we had to be regimented was supposed to be the fatal blow against the Forand

Bill. It was, of course, nothing of the sort, and the Bill is to be brought up again when Congress reconvenes. This time, perhaps, instead of more retreats and admissions of guilt, we can defend ourselves as we should have done before.

Through Blue Shield, we also extended the limits of full-service coverage, once more admitting the need to regiment ourselves. We implied once more that we were greedy and heartless, with no compassion for the family whose circumstances were limited. Almost all the doctors I know are sincere, dedicated men and women whose first concern is good care for their patients, with financial considerations coming later. These things are true, and I think we should say so.

It is popular to complain loudly and bitterly about the cost of medical care—which high cost, by some cerebral legerdemain immediately becomes a vastly increased profit in the doctor's pocket. The fact of increased hospital bills is largely ignored. Yet, here we should not criticize the hospitals nor agree with the patient who does. There are two hospitals in our city, and I am sure neither ever declares a dividend. The administrators of both have told me—and there is no reason to doubt either one—that 66 cents of each dollar they take in must be paid for salaries. From the other 34 cents must come food, heat, light, medicines, supplies and some provision for worn out equipment. Hospitals must compete for nurses, for example, with industrial plants and certain governmental agencies, not the least of which are the highly expensive and tax-supported Veterans Hospitals. Local hospitals must compete in a similar manner for secretaries, dietitians, janitors and all of the other skilled and unskilled personnel necessary to the operation of an efficient institution. Let us point out that the physician gets a much smaller share of the medical care dollar than do the hospitals, but let us also explain why that must be, and support those who run the hospitals, rather than join in criticizing them. An expression of our understanding of their problem might encourage reciprocal expressions on their part.

We know that medical fees have increased in the past 15 years or so, but let us point out that such increase is not so great as the increase in the costs of almost all other goods and services used in the country today. Let us point out that it takes many more dollars for the doctor to feed, clothe, house, protect and educate his children than it once did. If the private practitioner becomes disabled or dies, his wife and his growing children will still need food, clothing, shelter and education, and he must thus insure his life and his continued ability to work. The amount of that insurance must be increased to keep pace with inflation, and such increase requires more and more dollars. He may, some day, wish to work fewer hours or even to retire completely—an ambition encouraged in all other lines of endeavor. He must then have some kind of income to assure him and his wife at least life's necessities.

He cannot care for his patients on a park bench, but must have an adequate, well-equipped office, with competent help, to render the kind of medical care his patients have a right to expect. He must keep abreast of medical progress by buying and reading books and journals, and attending medical conventions and postgraduate courses. His instruments and equipment wear out and must be replaced. All these things require dollars and, as inflation has progressed, the number of dollars needed has increased proportionately. He has, in general, only one source for these dollars, and that is, of course, the fees he collects for the services he renders. He has had little, if any, influence in the progress of inflation, for the increase in his fees has followed behind the increase in his expenses.

Let us point out that our ladies, bless 'em, spend an estimated 4.3 billion dollars yearly for cosmetics and beauty shop services. No man in his right mind would wish to alter that a nickel's worth, for the resulting scenery is worth it all. However, it is estimated that physicians' fees also approximate 4.3 billion dollars yearly. I believe we are justified in thinking our services are worth at least as much as those of the cosmetic makers and beauticians.

Our purported high incomes and standard of living are the target of much criticism. Yet despite such favorable economic circumstances, the practice of medicine seems less attractive each year to our young people. The number and quality of applicants to medical schools seem to be decreasing each year, until there is real doubt that an adequate supply of doctors can be maintained. There must be several parts to the explanation for this declining interest in a medical career, but perhaps the carping and criticism directed at us has helped to make medicine less attractive.

Let us point out that the increased cost of being sick is not a result of the greed of doctors and hospitals, but is part and parcel of the increased cost of everything else. Let us stop our headlong capitulation to the insatiable demands of labor leaders and socializers. We know that the greater the interposition of a third party between the doctor and his patient, the greater the decline in the quality of medical care and the greater its cost. Let us say so! We have much to be proud of in American medicine. Let's tell about it! Let us have done with apologies!

Very truly yours,
JAMES F. BISHOP, M.D.

Davenport, Iowa
December 17, 1959

Statements published in these columns are not to be taken as reflections of the opinions or attitudes of the editors of the JOURNAL.

President's Page

During 1959, the Webster County Medical Society and the Pottawattamie County Medical Society held one-day regional postgraduate medical programs, at Fort Dodge and Council Bluffs, respectively, in cooperation with the ISMS Committee on Medical Education and Hospitals. Each of those meetings was well attended and enthusiastically received not only by the local doctors but by physicians from the surrounding counties.

I should like to encourage other county medical societies to undertake acting as hosts for similar gatherings this year. The pattern, thus far, has been to secure three or four speakers to talk upon problems of general interest to doctors, one speaker from outside the state and the others from Iowa. There have been two sessions, afternoon and evening, the latter commencing with a dinner.

County medical societies willing to undertake joint sponsorship of regional postgraduate programs with the ISMS are invited to get in touch with the committee chairman, Dr. Lee Forrest Hill, in Des Moines.

John W. Billingsley

President

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

MANAGEMENT OF THE AGED SURGICAL PATIENT, by *Sidney E. Ziffren,* M.D. (Chicago, The Year Book Publishers, Inc., 1960. $7.50).

THE YEAR BOOK OF PEDIATRICS, ed. by *Sydney S. Gellis,* M.D. (Chicago, The Year Book Publishers, Inc., 1959. $8.00).

BOOK REVIEWS

THE CIGARETTE HABIT, by *Arthur King.* (New York City, Doubleday & Company, 1960).

The author has prepared an excellent manual comparing the cigarette habit to narcotic addiction in its firm hold upon the individual. He has outlined a concerted attack for anyone who is desirous of breaking himself of the habit, with both psychological preparation and the assistance of drugs and other media.

Undoubtedly the sale of this book to lay people will assist materially in freeing many individuals from the cigarette habit.—*Everett M. George,* M.D.

OBSERVATIONS ON "DIRECT ANALYSIS" THE THERAPEUTIC TECHNIQUE OF DR. JOHN N. ROSEN, by *Morris W. Brody, M.D.* (New York, The Vantage Press, Inc., 1959. $2.95).

This book, containing the forewords by Dr. John N. Rosen and Dr. O. Spurgeon English, is a report of observations conducted by the author and others. Apparently Dr. Brody, along with a group of other observers, watched Dr. Rosen demonstrate the technics of "direct analysis" with cases of schizophrenia. This work is an attempt to convey to the reader the remarks made by the patient and by Dr. Rosen.

Along with these quotations are the impressions of the author as to the dynamics and as to the interpersonal relationship that is being displayed. The author has undertaken an exceedingly difficult job, and the limitations under which he must work are obvious. The feeling tone of both the patient and the physician cannot be clearly delineated through the written word. The impressions of observers are always affected by their previous experiences, as are their descriptions of that which is dynamically active. But these handicaps do not render the work useless, and different concepts and ideas are stimulated in the reader as he peruses this book.

One gets quite different impressions of "direct analysis" from reading this book and from reading Dr. Rosen's original work. However, the fact that Dr. Rosen is dynamic and histrionic, and that perhaps his words and actions carry a connotation of hostility, are not to be understood to mean that the patient, who is interpreting Dr. Rosen's behavior in terms of himself, regards him as hostile, as the author of the book concludes. The patient may feel quite the reverse. Thus many conflicts of opinion are bound to be stimulated by Dr. Rosen's technics and by the men who report their opinions of those technics.

There were other members of the observational group, and it is said that their impressions will be published. These should form a valuable set of studies with reference to this particular therapeutic method. —*Howard V. Turner,* M.D.

CHRISTOPHER'S MINOR SURGERY, EIGHTH EDITION, ed. by *Alton Ochsner,* M.D., and *Michael E. DeBakey,* M.D. (Philadelphia, W. B. Saunders Company, 1959. $10.50).

As the editors have pointed out in their preface, the title of this book is poorly chosen, for the volume presents, for the most part, the differential diagnoses of a great number of conditions that one may see in an office practice. Nevertheless, the book is well written, and in my opinion contains several particularly good chapters. The one on anesthesia and resuscitation points out the pitfalls of general anesthesia, and more importantly, gives valuable information on the technic of local and regional anesthesia. In this chapter, the editors also go into the pharmacology of the more commonly used local anesthetic agents.

The section dealing with the treatment of the commoner musculoskeletal injuries is brief but quite complete. The book also contains a very complete section on the differential diagnosis of lesions of the head and neck region.

Last, the section on peripheral vascular disease, written and edited by Drs. DeBakey and Creech, is an extremely good review of the differential diagnosis involved in numerous conditions included under the broad category of peripheral vascular disease.

I would recommend this book as a ready but quite complete reference that can be used in any office.—*Charles C. Edwards,* M.D.

ATLAS OF ROENTGENOGRAPHIC POSITIONS, VOLS. I AND II, SECOND EDITION, by *Vinita Merrill.* (St. Louis, The C. V. Mosby Company, 1959. $32.50).

This excellent two-volume text concerns itself primarily with the positioning of patients for the proper preparation of diagnostic radiographs. Thus, this most important and often least understood and practiced component of radiographic technic has been well documented.

It is 10 years since the first edition of this atlas was published, and in that length of time new radiographic technics have been developed necessitating additional and expanded sections in this edition. The author states, however, "that a reasonably complete reference

work of roentgenographic positions should be as permanent as a standard dictionary—that it should not, at this stage of development, need frequent revision." Thus, the usefulness of the principles outlined in this atlas should not diminish in the future years.

The text is divided into the various anatomic systems. Fundamental anatomy is outlined at the beginning of each section. Then excellent photographs show the proper positions of the patient and the resulting radiographs. Concise descriptions of the procedures accompany all of the illustrations. A detailed bibliography cleverly arranged in chronological order covers each section, and there is a complete index at the end of each volume.

Although it is stated that the work is to "provide a practical reference book for x-ray technicians," radiologists, residents in radiology and other physicians using x-ray would greatly benefit from its use.—*James T. McMillan,* M.D.

EVOLUTION OF NERVOUS CONTROL, ed. by *Allan D. Bass.* (Washington, D. C., American Association for the Advancement of Science, 1959. $5.75).

This is publication No. 52 of the American Association for the Advancement of Science.

Behavior is defined as responsiveness to stimuli and described as a characteristic of life. It is pointed out that "the biochemical energy mechanisms developed some thousand million years ago in unicellular organisms still have their close counterparts in our bodies." Also, "the response mechanisms in the one cell of the ameba may be activated in basically the same way as each of the billions of cells in our brains." Viewpoints on the impact of the evolutionary process upon the brain are presented by a botanist, an embryologist, a neurologist, a neurophysiologist, a physiologist, a psychologist and a psychiatrist. Nine chapter headings are included in this study.

It is pointed out that behavior is controlled in plants, protozoa and sponges, even though there is no differentiated nervous system in such primitive forms of life. This means that behavior does not always depend upon the activity of nerves. Behavior is one of the manifestations of the regulatory action of protoplasm. The biological basis for the evolution of the mind is stated by noting that all ideas at first were purposes, and that mind is the control of behavior in conformity to norms or purposes set up in the organism. The control of behavior, we are told, "is general protoplasmic control raised to its highest level."

The embryologist's contribution details past experiments which revealed that implantation of the dorsal lip of the blastophore acted as an "organizer" in the host. The chemical nature of the inductor tissue has been studied in detail and found to be ribonucleoprotein in nature.

The neurophysiologist states that nervous function takes its origin in the general polarized properties of cell membrane. As a result of stimulation, changes in ion permeability occur, affecting the transmembrane potentials. A cell which is electrically excitable exhibits three functionally distinct portions. There is the input or receptor cell element, not responsive to electrical stimuli. The second component is the electrically excitable, spike-generating membrane structure, and the terminal portion is essentially a secretory structure.

Neurohumoral agents, apparently the product of neurosecretory cells, include acetylcholine, norepinephrine, adenosine, triphosphate, serotonin, GABA, substance P and others. These are adequately discussed in a separate section.

"Chemistry of the Brain," another chapter by Irvine H. Page, M.D., deserves special note. This section is clearly and readably written—something which, unfortunately, cannot be said for all portions of this text. Dr. Page points out that porphyria, for example, can cause bizarre psychic behavior. It is suggested that the brain has as one of its functions the secretion of hormonelike materials. Serotonin may be a neurohumoral inhibitor, and specifically to acetylcholine. It has been suggested that mental disturbance may result from an imbalance between serotonergic and adronergic inhibition and cholinergic excitation in cerebral synapses. The action of lysergic acid diethylamide is also described.

Dr. Teuber, a neuro-psychiatrist, analyzes alterations in behavior after cerebral lesions in man. The observations were based on a group of 232 men with penetrating battle wounds of the brain (followed for an average of seven years). One significant finding was that among those with penetrating injuries to the left parieto-temporal areas, the greatest decline was found in intellectual test results. Because of this and other evidence, the author raises doubt as to the evolutionary "all-surpassing development of the frontal lobes."

In the concluding chapter, entitled "Psychoanalysis and Human Behavior," it is pointed out that Freud's formulations included the concept that all behavior is activated by the physiological needs of the organism. The author then describes a group of experiments in both animals and human beings that appear to support Freudian psychology. I found it difficult to understand why such a section had been included in this book.

Even the lowest levels of behavior involve purposiveness, but the sequence of acts by which the goal is reached is not always the same. Behavior is more than a reflex act. Mental processes are primarily regulations. The state of the organism affects the response. "What in the fertilized egg represents the adult organism which will be produced, and what in a brain cell represents a purpose yet to be realized in behavior?"

This volume lacks consistency in its avowed purpose of dealing with the evolution of nervous control as far as the reviewer is concerned. Some sections make interesting and valuable reading, but it is difficult to know to whom to recommend this text.—*John T. Bakody,* M.D.

GLAUCOMA STUDIES

A cooperative five-year study of technics currently in use for the detection of glaucoma is now under way at four research centers, with federal assistance. Grants totaling $115,000 a year are helping finance projects at Wilmer Institute, Baltimore; Moffitt Eye Hospital, San Francisco; Washington University School of Medicine, St. Louis; and the State University of Iowa College of Medicine, Iowa City.

The program has four objectives: (1) definition of early-stage glaucoma; (2) attainment of methods for earlier detection; (3) better understanding of symptomatology; and (4) evaluation of the efficiency of present diagnostic technics.

STATE DEPARTMENT OF HEALTH

COMMISSIONER

INFLUENZA SURVEILLANCE REPORT

Outbreaks of influenza-like disease have been officially reported in 14 states and the District of Columbia, Surgeon General Leroy Burney reported on January 21. States reporting isolation of the Asian strain were California, Hawaii, Iowa, Michigan, Pennsylvania, Texas, Washington and the District of Columbia. In addition, reports of influenza-like disease outbreaks had been received from Kentucky, Mississippi, Nevada, Ohio, Tennessee, Utah and West Virginia. Upwards of 500,000 cases had been reported in Los Angeles, where absenteeism from school and work was estimated at about 15 per cent. Eight isolations had been made of the Asian strain.

Iowa physicians are requested to report promptly any local outbreaks of what appears to be influenza either to the State Department of Health or to the World Health Organization's Regional Influenza Surveillance Laboratory at Iowa City.

BRUCELLOSIS STUDY CONTINUES

A year ago, a study was initiated in an attempt to determine the residual effects of brucellosis. Persons who had culturally proven brucella infections in the 1930's and 1940's were located, and their medical histories for the intervening years were obtained either from them or from their doctors. In some instances a great deal of difficulty was encountered in locating the individual because he had moved one or more times. On those of them who have died, information has been obtained from death certificates, autopsy reports and other medical records. A large number of the patients have been found, and this phase of the study is nearing completion. The findings will be summarized, evaluated and reported in a medical journal.

The second phase of the study is being started under the terms of a research grant awarded for this purpose by the National Institutes of Health, U. S. Department of Health, Education and Welfare. Of the cases located during the first year, a statistically significant number selected at random will be given complete physical examinations to determine their health status at the present time. For comparative purposes, a control group made up of persons of the same sex and age group who have not had brucellosis will be given similar examinations. An evaluation of the findings on the two groups will then be made to determine whether or not any significant differences exist.

The work is being done jointly by staff members of the Division of Preventable Diseases and of the State Hygienic Laboratory of the Iowa State Department of Health, and by Dr. Ian M. Smith, assistant professor of internal medicine at S.U.I.

Brucellosis research of this type is possible in Iowa as a result of the recognized high incidence of the disease in men over a period of more than two decades. During this time, the type of brucella organisms have been determined in hundreds of cases by Dr. I. H. Borts and his associates at the State Hygienic Laboratory. It is because of this background of basic information that the after-effects of undulant fever can be studied.

CURRENT STATUS OF LIVE POLIOVIRUS VACCINE

The following article by Dr. Leroy E. Burney, surgeon general of the U. S. Public Health Service, reproduced as it appeared in the December 18 issue of J.A.M.A., summarizes the Public Health Service's observations on the current status of the live poliovirus vaccine:

"A considerable fund of information has been accumulating on the properties of live-virus poliomyelitis vaccines and on the use of these vaccines in human beings. The recent publication of the proceedings of the conference on live poliovirus vaccines, held in Washington, D. C., June 22-26, 1959, under the auspices of the World Health Organization and the Pan American Health Organization, provides a good opportunity to review the current state of knowledge.

"The proceedings contain progress reports on field studies of these vaccines now under way in countries in Europe, Asia and South America. Great numbers of people have been vaccinated in the U.S.S.R. and elsewhere. In general, the reports indicate a good record of safety for the vaccines under trial, although the extent of surveillance and follow-up study is somewhat unclear.

"The attenuated live viruses used in these vaccines have lost the power to produce disease through a process of selective cultivation in the

laboratory. They can, however, be transmitted by persons who have ingested them to others through natural means. On this point, the conference report noted, 'The use of a product that spreads beyond those originally vaccinated represents a radical departure from present practice in human preventive medicine.'

"It has been maintained that this might be a useful characteristic under certain circumstances, i.e., if there were assurance that the virus would remain in an attenuated state after passage through the human intestinal tract. A number of reports presented at the conference, however, including those of Melnick, Verlinde, Smorodintsev and Stuart-Harris, indicated a potential in at least some of the vaccine viruses under consideration for reversion to virulence. This suggests a strong need for further study of the vaccines before they can be recommended for general use. The problem of reversion to virulence has been highlighted again in a recent report by Melnick and co-workers.[2]

"The principal problem, therefore, in evaluating the ultimate safety of live poliovirus vaccines is the possibility of the spread of virus, coupled with its potentiality for reversion to virulence.

"In June, 1958, the Public Health Service established a committee on live poliovirus vaccines, composed of experts in the field of virology and immunology from within and outside the government. This committee has been closely following developments relating to live-virus vaccines, both in the laboratory and in field trials in various parts of the world. The group recently drafted recommendations[3] pertaining to the problems which must be solved before licensing of a commercially produced vaccine can be considered.

"In addition to providing satisfactory results of field trials, a vaccine designed for general use must meet certain laboratory tests. Such tests represent the only experimental criteria available for the continued control of individual lots of vaccine as they are produced by the manufacturers.

"One criterion is based on the vaccine's degree of neurovirulence for monkeys. As the recent conference report disclosed, results obtained by different investigators have varied considerably. In order to obtain comparative information on the three sets of strains (Sabin, Cox and Koprowski) in the experimental vaccines, the Division of Biologics Standards, which administers the Public Health Service's responsibilities in the field of biologicals control, carried out studies of these strains under standardized conditions. The data showed that there is considerable difference among the three sets of strains, from the point of view of their neurovirulence in monkeys, as determined by histological lesions and paralysis occurring after intracerebral and intraspinal inoculation.[1] These results are also in agreement with those of Melnick and co-workers.[2]

"The committee on live poliovirus vaccines therefore recommended that a virus strain be considered satisfactory only if its neurovirulence as tested by the recommended procedures is low. In addition, the committee agreed that live-virus vaccine strains must also demonstrate inability to revert to significant neurovirulence after passage in human beings.

"Each lot of vaccine produced must be shown to possess the same genetic markers as the seed virus. These genetic markers are inherent properties of a virus strain. If the markers of an individual lot of vaccine differ from those of the seed, that lot should not be used for immunizing human beings. A number of the markers are determined by studying characteristics of virus strains in tissue culture. One such characteristic, called the temperature (t) marker, involves the growth of the virus at higher temperatures, such as 40°C. (104°F.). The virulent virus generally grows well at this temperature while the avirulent virus grows poorly, thus providing an element of discrimination. Another characteristic is the ability of the virus to grow when only a small amount of sodium bicarbonate is present in the tissue culture medium. A third characteristic is the MS (monkey-stable) marker, involving cultivation on a stable, continuous, tissue-culture cell line derived from monkey kidney.

"The determination of a number of these, and perhaps other, markers is essential in order to differentiate between the attenuated and the virulent or wild strains.

"A realistic consideration of these and other problems makes it difficult to predict when a live poliovirus vaccine could be licensed for commercial production. The Division of Biologics Standards has met with the vaccine developers and with interested manufacturers as a step in establishing standards for safety and for production of such vaccines. The Public Health Service cannot recommend the licensing of such a biological product until the manufacturer has demonstrated not only the safety and potency characteristics of the vaccine strains, but also his ability to meet established standards for successive production lots of vaccine."

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In the Public Interest



Science Is All of a Piece

In the thousands of years that medicine has existed, its accumulation of knowledge and skills has been augmented through the ingenuity not just of its practitioners but of men and women from many other walks of life.

Of course it would be silly to assert that doctors of medicine—every one of them and all of the time—have maintained open minds and have been willing to suppose that "laymen," as they call all of the people who lack their particular type of training, are capable of worthwhile contributions to the art of preventing or treating disease. On the contrary, a new medical idea from whatever source has always encountered resistance, sometimes bordering upon hostility, for physicians are proud of their accomplishments, and they prefer to utilize technics and remedies that have long proved their worth. Patients, incidentally, have reason to be thankful that doctors take that attitude.

INADVERTENT SUGGESTIONS HAVE COME FROM NON-MEDICAL PEOPLE

It is nonetheless true that medical men, time after time, have accepted and used devices and suggestions that originated with individuals outside their own group. Sometimes laymen's ways of doing things merely suggested a technic to doctors who were hunting for answers to seemingly unsolvable problems. In about 1800, Dr. Leopold Auenbrugger, a young Austrian physician, chanced to notice an innkeeper rapping on a beer keg to discover how nearly full it was, and thus was led to originate the "tapping system" for detecting lung congestion. The innkeeper doubtless was using a trick that his father and his grandfather had used before him, and he certainly could have had no notion of its applicability in medical practice, but he nevertheless was responsible for a testing device that doctors have used many times a day ever since.

Similarly, Dr. Theophile Laennec, in 1816, was inspired to invent a basic diagnostic instrument as he watched two Parisian children at play. He had been at a loss for a means of listening to the chest sounds of an especially well-upholstered young woman, one of his heart patients, without her misinterpreting his motives, but as he watched the youngsters tapping coded messages to each other as they knelt at either end of a long wooden beam, he suddenly realized that a sound-conductor superior to air would enable him to listen to the human heart at a convenient and, in this instance, safe distance. In consequence he fashioned a stethoscope, a device which many authorities have ranked as the single most important medical invention.

As everyone knows, country people from time to time have discovered what seemed to be medicinal qualities in the plants that grew wild in their fields. In many cases their reliance on such remedies was mere superstition, but in others they had found something really worthwhile, and doctors of medicine proceeded to make use of their materials. Dr. William Withering had learned to use foxglove in the treatment of dropsy from the farm families of his native Shropshire, and he treated heart disease patients with it during and after the Revolutionary War, in America. All of us now know the active ingredient in the flower of the foxglove plant by the name *digitalis*. The housewives from whom Dr. Withering got this medicant had thought it necessary to mix other herbs with it, and as it happened, those added ones were superfluous, but they had sought a medicine for a particular type of illness, and they had accomplished their purpose.

SPECIFIC MEDICAL IDEAS HAVE COME FROM SIMILAR SOURCES

Smallpox was one of the plagues that swept Europe again and again during the Middle Ages and the Renaissance. At the very end of the latter period, in 1660, if fire hadn't destroyed most of the City of London, and the smallpox germs along with it, most of the population would have died of the disease. Almost a century later, in 1768, Dr. Edward Jenner was told by a milkmaid that she couldn't catch smallpox because she had already had cowpox, a very minor affliction that was common among cows and the people who tended them. Jenner reasoned that if she were right, the thing

to do was to see to it that everyone in Europe caught cowpox, and thus vaccination began. Subsequent research has revealed that his idea wasn't original—that vaccination had been performed previously on a small scale—but for his rediscovery, medicine is indebted to a milkmaid who knew precisely what she was talking about.

PHYSICIANS ARE INDEBTED TO ALL OTHER SCIENTISTS

As is no more than reasonable, scientists in parallel lines of endeavor have been responsible for more numerous and more fully developed advances in medicine than have other non-medics. Foremost in this regard have been the physiologists, the chemists, the biochemists and the physicists. Without letting this account degenerate into a mere list of names, we can mention only a very few of the most outstanding innovators.

Science, it goes without saying, is all of a piece, and the originator of each bit of basic scientific knowledge must be ranked as a contributor to the science of medicine. Thus, the roll must include Black, who discovered carbon dioxide in 1757; Cavendish, hydrogen, 1766; Rutherford, nitrogen, 1772; and Priestley and Scheele, oxygen, 1771. Other chemists were responsible for developments out of which medicines were later made. For example, an English chemist named Perkin conducted experiments the immediate product of which was a wash-proof and fade-resistant purple dye, but from his work the entire spectrum of coal tar chemistry grew, and not the least of the end products was aspirin.

Louis Pasteur (1822-1895) is the chemist to whom medicine is most deeply indebted.

Biochemistry is a relatively new profession very closely linked to medicine, and its members in the employ of pharmaceutical manufacturers, universities, hospitals and research foundations have been responsible, either by themselves or in collaboration with doctors of medicine, for the introduction of the antibiotics that our generation calls "the wonder drugs." Of these men and women, probably the most famous is Sir Alexander Fleming, the discoverer of penicillin.

Physicists have been almost as helpful to medicine as have the chemists and biochemists.

Konrad Roentgen obviously was indebted to a host of forerunners in the development of electricity, but his discovery of x-ray photography was nevertheless an accomplishment for which doctors and patients everywhere will be eternally grateful. Enrico Fermi, Ernest Lawrence and others of our contemporaries the atomic physicists are to be thanked for medical technics of incalculable value.

THE PARAMEDICAL PROFESSIONS HAVE DEVELOPED THEIR RESPECTIVE AREAS

But now let's give some thought to the other groups of people who undertake work that is similar to that of doctors of medicine. The dentists and oral surgeons are well-educated people who do their work with complete competence. Incidentally, it is to a couple of mid-nineteenth century dentists, Wells and Morton, that medicine is indebted for the introduction of ether anesthesia. Doctors of veterinary medicine, similarly well-trained for their work, are helping to explore and find preventives and cures for diseases of animals transmissible to man. Nurses, beginning with their profession's illustrious founder, Florence Nightingale, have both led and cooperated in the sanitation of hospitals and the refinement of patient care. The physical therapists and the clinical psychologists have helped to perfect the procedures in which they engage.

THUS FAR, THE CULTS HAVE OFFERED NOTHING OF VALUE

Besides these, there are of course the cultists and "healers" whose technics the public has been urged to think as efficacious as those of doctors of medicine. Physicians, though not overanxious to employ radical innovations in the treatment of patients, stand ready to examine and test suggestions from any source. But, as Sections 2 and 3 of their PRINCIPLES OF MEDICAL ETHICS require, they insist (1) that such ideas must be susceptible of scientific proof, and (2) that their proponents expound them fully and agree to have them explored so that, if they prove valuable, they can be used for the benefit of patients everywhere.

Iowa licenses three types of practitioners of the "healing arts." In addition to physicians and surgeons, it recognizes osteopaths and chiropractors. Doctors of medicine regard osteopaths as cultists for the reason that those men and women either have never been willing or have never been able to present a scientific demonstration or proof that the so-called "osteopathic lesion" exists, and despite their adopting nearly all of medical science as their own, they continue maintaining that the "osteopathic lesion" is the center of their system of pathology. The osteopaths have recently taken steps toward the abandonment of all claims that lack scientific foundation, and a joint committee of the Iowa State Medical Society and the Iowa Society of Osteopathic Physicians is about to start conferring on common problems, which include the possible furtherance of this objective.

Chiropractors, on the other hand, are divided into two schools, both of which make unsubstantiated claims that their methods are scientific, and one of which is seeking greatly to expand its scope of practice.

Medicine remains willing to examine, test and adopt new methods from any source, but the record shows that neither of these last-named groups has offered scientific evidence of having achieved a medical advance of any consequence, and a grasp of that basic fact is important if one is to understand the attitude that physicians take toward them.

CHARGES FOR TWO-BED HOSPITAL ROOMS VARY WIDELY

The average charge for a two-bed semi-private hospital room in cities of more than 100,000 population ranges from a low of $9.29 a day to a high of $27.80 a day, according to a study made recently by the Health Insurance Institute, a cooperative maintained by commercial firms in the health insurance field. When its nationwide survey was extended to cities with populations of 25,000 or more, the variance was even wider, with a low of $8.00 and a high of $32 a day.

The study was based on information supplied by the American Hospital Association from a survey of hospitals throughout the U. S. conducted in early 1959, measuring weighted average hospital room rates for cities of 25,000 or more population.

Generally, rates and charges were higher in the West, Northeast and North Central sections than they were in the South, but there was also a considerable spread in the average hospital rates within large cities, due to the existence of both large and small hospitals, some of the latter of which offer only relatively simple services.

The average rates for a two-bed semi-private hospital room in some of the nation's larger cities are listed below, in descending order of cost:

Oakland	$27.80
Los Angeles	25.40
San Francisco	25.22
Cleveland	24.34
Boston	24.04
Seattle	23.50
New York City	20.93
Minneapolis	20.63
Detroit	20.00
Washington, D. C.	19.80
Chicago	19.77
Phoenix	18.86
Milwaukee	18.24
Indianapolis	18.11
Baltimore	16.94
Omaha	16.85
Pittsburgh	16.85
Philadelphia	16.48
St. Louis	15.88
Denver	15.66
Kansas City, Mo.	15.29
Salt Lake City	14.71
Dallas	14.44
Louisville	14.30
New Orleans	14.28
Miami	14.24
Memphis	13.68
Atlanta	13.06
Tulsa	12.09
Montgomery	9.29

Nearly 22,000,000 persons—one out of every eight in the U. S.—were admitted to the nation's short-term general hospitals in 1958, according to statistics of the American Hospital Association.

MORBIDITY REPORT FOR MONTH OF DECEMBER—1959

Disease	*1959 Dec.*	*1959 Nov.*	*1958 Dec.*	*Most Cases Reported From These Counties*
Diphtheria	0	0	0	
Scarlet fever	153	140	174	Jefferson, Johnson, Polk
Typhoid fever	0	1	0	
Smallpox	0	0	0	
Measles	396	37	1630	Hancock, Poweshiek
Whooping cough	23	43	13	Scott
Brucellosis	21	9	17	Dubuque, Scott
Chickenpox	332	323	389	Black Hawk, Clay, Des Moines, Linn
Meningococcic meningitis	1	2	2	Woodbury
Mumps	160	93	362	Clinton, Linn, Shelby
Poliomyelitis	2	8	9	Pottawattamie, Sac
Infectious hepatitis	25	14	4	Polk, Scott
Rabies in animals	18	12	18	
Malaria	0	0	0	
Psittacosis	1	0	1	Webster
Q fever	0	0	0	
Tuberculosis	41	30	33	For the state
Syphilis	61	102	90	For the state
Gonorrhea	73	72	82	For the state
Histoplasmosis	17*	0	6	Henry
Food intoxication	0	0	0	
Meningitis (type unspecified)	8	1	0	Clinton
Diphtheria carrier	0	0	0	
Aseptic meningitis	2	2	2	Dubuque
Salmonellosis	2	0	6	Polk
Tetanus	3	0	0	Des Moines, Howard, Jones
Chancroid	1	0	0	Dubuque
Encephalitis (type unspecified)	1	0	2	Jones
H. influenzal meningitis	2	0	1	Butler, Des Moines
Amebiasis	2	1	0	Dubuque, Scott
Shigellosis	3	0	2	Polk
Influenza	2	2	7	Johnson

* Delayed.

Woman's Auxiliary News

YOU ARE IN PUBLIC RELATIONS

Every one of the 80,000 members of the Woman's Auxiliary is in medical public relations.

How can you—a willing worker in the Auxiliary—help to mold public opinion on behalf of the medical profession? There is no magic formula. The only way I know to achieve our aim is to keep yourself constantly informed about all the things that affect medicine and the medical profession.

There is no limit to an Auxiliary member's influence or to her ability to help other people understand the facts, especially as they relate to socio-economic affairs—hospital costs, drug costs, insurance plans and doctors' fees. *Socio-*, incidentally, means "the people"; *economic* relates to their pocketbooks. The term *socio-economic* thus applies to the way all different groups of people obtain and pay for their medical care.

Auxiliary members are interested in these problems. One of the best ways to keep yourself informed about them is to read the AMA NEWS from cover to cover. Read other official publications. Discuss the more complex problems with your husband. Study trends not only in medicine but in allied fields. Then, when you are sure of your ground and possess specific information about a particular problem, explain your point of view to someone outside of medicine.

Often when we set out to do a job of education, we think in lofty terms—of pamphlets, magazine articles, radio and television appearances, forums, symposia, and luncheon and dinner meetings. We ignore the simplest, least expensive and most effective medium of communication, word of mouth in neighbor-to-neighbor conversations. People like to ask questions, and they want immediate answers. They can't carry on a conversation with a pamphlet or a magazine. They can't interrupt a radio or a television address.

As wives of hard-working physicians, the whole field of good medical public relations lies before you. The extent to which you *are* in public relations probably depends more on you than on anyone else.

(With our State Auxiliary president, Mrs. E. A. Larsen, a patient in St. Joseph Mercy Hospital, Centerville, as a result of an automobile accident, we are relaying the above message which, we feel sure, accurately reflects her thinking. It is based upon the President's Page written for the January, 1960, BULLETIN *of the AMA Woman's Auxiliary, by Mrs. Frank Gastineau.)*

OUR PRESIDENT SAYS—

As I write this, I am recuperating from a broken leg, head injuries and other painful consequences of an automobile accident that occurred on Sunday, January 10, as my husband and I were on our way to Des Moines, where he was to have attended a meeting of the ISMS Automotive Safety Committee.

My husband had received a call—quite urgent—to go out on a gravel road south of Corydon just as we were about to start for Des Moines, so we decided that I should go along and that we would take No. 14 north from Corydon to Chariton and on to Des Moines, instead of returning here and going the regularly traveled road. We had seen no icy spots and the road was sanded until suddenly we saw ice ahead, a bridge and no sand. I guess it was at the county line. Larry slowed down, but his brakes did no good and we started to slip. There was a small ditch and high banks on both sides, and as we slid into the ditch the door on my side popped open and I was thrown out. Larry, too, was thrown part way out my door, so that he saw the car wheel go over me. Before he could get up, it rolled down over me again. The car didn't overturn, and a seat belt would have saved me from injury in that accident.

I evidently lit on my forehead and shoulder, but a bloody nose and a black eye seem to be the only damage there. The break in my leg isn't bad either, but there was so much soft-tissue damage that a cast couldn't be put on it, so it's had hot, wet packs and has been elevated, yet! If I don't get a foot- or toe-drop, everything should be fine. Thank heavens it happened to me instead of to Larry, for he takes Dicumerol, and he would have bled so much more. A stiff neck and the jitters seem to be his worst effects.

Everyone has been so good to us, and we appreciate the mail so much. The plants from the ISMS and the Auxiliary were beautiful!

I hope all of you will forgive my not writing you my usual letter "From the President" this month.

—MRS. E. A. LARSEN
President

COMMUNITY SERVICE AWARD

As a member of the Auxiliary, either in an organized chapter or as a member-at-large of the State Auxiliary, you should be interested in the Community Service Award, the presentation that your organization makes each year to a lay woman who has contributed voluntarily and significantly in either health service or health education. Actually, many lay women are so recognized each year, for one is selected by each county Auxiliary and one of them is then chosen as the State Auxiliary's honoree.

This award was first made in 1956, and the first statewide recipient was Mrs. C. C. Inman, of Bancroft, who was chosen for her activities in rural health projects and health education. The following year, it was presented to Mrs. Read Arthur, of Clarinda, for her leadership in organizing the Gray Man program at the Mental Health Institute in her home town. Mrs. Maurice L. Northrup, a tireless leader in voluntary work at Mercy Hospital and Veterans Hospital, Des Moines, received the 1958 award, and Mrs. A. M. Davis, of Sioux City, was recognized in 1959 for her long record of volunteer service in Red Cross, social service work with the Jewish Federation, the child care committee of the Council of Community Services, and the Siouxland Association for the Mentally Retarded.

Many Auxiliary groups have indicated they have plans for the outstanding voluntary health worker in their communities. If you haven't started your work on this project, please do so soon.

WELCOME BUCHANAN COUNTY

One of the many rewards of dedicated work in Auxiliary is to witness the birth of a new county organization. Sue Gerken and I were thrilled with the eagerness of our new "baby," Buchanan County.

As usual, a few women with zeal must have been spearheads. By the time we met with them, their enthusiasm had spread to the others so completely that it was difficult to determine who really initiated the "spark." They were beautiful women, physically and spiritually.

The unusual aspect of this group was its international flavor. In fact, it was a miniature United Nations without bickering. Wish all of you could meet all of them! Thank goodness for State Convention!

Mrs. Korson was elected county president and she could win a "Mrs. America" contest anytime. (She's much too busy to bother with that.)

Buchanan County provides a sort of built-in benefit at the Mental Health Institute. The new chapter's secretary, Mrs. Mochal writes that 42 children were given treats by this Auxiliary.

Keep up the good work, Buchanan County!

MRS. R. F. NIELSEN

COURTESY MEMBERSHIPS

The presidents of organized Auxiliaries in Iowa have received a letter explaining the new "Courtesy Membership Card." The president of each county Auxiliary is urged to extend an invitation to each member-at-large in neighboring counties to attend her chapter's meetings through the "Courtesy Membership Card."

Organized Auxiliaries are urged to take advantage of this plan to become better acquainted with physicians' wives in nearby counties. Courtesy extended to eligible non-member wives will also give the county Auxiliary a part in that all-important work of helping increase membership. Physicians' wives have the advantage of a mutual interest—a personal and intense interest—in supporting the medical profession. Auxiliary membership is insurance for the survival of the free practice of medicine!

A "Courtesy Membership Card" could also be offered to the member of a nearby county Auxiliary who usually accompanies her husband when he attends your county medical society's meetings but who might not otherwise feel free to attend meetings of your Auxiliary that are held on the same evenings.

ANNUAL MEETING

It is not a bit too soon to begin making your plans to attend the State Auxiliary's Annual Meeting in Des Moines, April 25 and 26.

There will be fun as well as the all-important exchange of ideas and information in which you—as "Medicine's Best Ally—Its Woman's Auxiliary"—should be interested.

The Polk County Medical Auxiliary works very hard to make your two- or three-day stay in Des Moines a pleasant experience, and the meeting gives you a fine opportunity for renewing friendships as well as for meeting other interesting people.

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. E. A. Larsen, 323 Oak Street, Centerville
President-Elect—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. H. C. Merillat, 116 Lincoln Place Drive, Des Moines 12

Iowa Academy of General Practice

AAGP TWELFTH ANNUAL SCIENTIFIC ASSEMBLY

The twelfth annual meeting of the AAGP Congress of Delegates and Scientific Assembly will be held in Philadelphia, March 19-24. The program will be interesting, informative and challenging, and credit must be given to Dr. G. L. Lester, of Chatauqua, New York, and his committee for their untiring efforts in formulating it.

The opening scientific session, on Monday afternoon, March 21, will feature a panel of speakers moderated by Dr. Horace Eshbach, Drexel Hill, Penna., formerly vice-speaker of the Congress of Delegates, covering the moral, legal and social aspects of the relationships of "The Doctor, His Wife and the Patient." The panel will consist of a physician's wife, a minister, a journalist and a physician who holds a degree in law.

The second session on Monday will be concerned with geriatrics. This phase of health is becoming progressively important for everyone, including the physician. Dr. W. C. Beek, Sayre, Penna., will present a discussion of "Surgery in the Second Half-Century." His presentation will not be limited to surgical technics, but will also include the philosophy involved in the management of elderly surgical patients. Dr. E. L. Bortz, Philadelphia, will speak on the topic "Worn Out or Just Tired." His presentation is formulated along the line that the "tired old man" comes to the doctor with a variety of complaints, of which the underlying causes may be an organic disorder, anemia or malnutrition, emotional shock, or merely boredom from lack of a sustaining motive in his retirement.

On Tuesday, the program will open with an address by Dr. W. W. Spink, Minneapolis, who is noted for his work in chemotherapy, on "New Developments in Antibiotic Therapy." He proposes to discuss the tremendous advancements that have taken place in the management of infectious diseases, and he will devote special attention to the management of staphylococcal sepsis and the treatment of urinary infections. The second speaker at this session will be Dr. E. A. Brown, Boston, whose private practice is devoted to allergy. His topic will be "Reactions Encountered in Treatment With Antibiotic Agents." In his discussion, he will point out how antibiotics, when used to treat an ill patient, may produce other signs and symptoms that may complicate both the diagnosis and the treatment. He will also point out the value of anticipating any reaction or anaphylactic shock in its incipient state.

The second session on Tuesday morning will take up preventive pediatrics. Dr. J. G. Hughes, of the University of Tennessee Medical School, who has spent considerable time teaching postgraduate courses in pediatrics to general practitioners, will discuss "Management of Acute Nephritis in Childhood." This discussion will cover the major complications of acute nephritis, as well as convalescent care, ambulation and supervision of the child in subsequent months. The second speaker will be Dr. Leona Baumgartner, New York City, who will discuss "The Family Doctor and Child Health." She believes that the family physician is in a position to play a large role in feeding problems, immunizations, hearing and vision tests, accident prevention and parental guidance. Also, because of his familiarity with the family background, she thinks that he can render valuable assistance to teachers regarding the problems of childhood and adolescence.

The first session on Tuesday afternoon will be devoted to surgery. Dr. J. P. Nesselrod, of the Northwestern University Medical School, will discuss "The Surgery of Pilonidal Disease." He believes that knowledge of the pathogenesis of the disorder is essential to an understanding of its treatment. He will discuss (1) excision and primary closure, (2) excision without primary closure, and (3) compromise procedures. The second surgical discussion will be "Office Management of Certain Anorectal Problems" by Dr. R. J. Jackman, of the Mayo Foundation. He thinks it is wrong to classify most anorectal procedures as minor ones that may be performed in the office, and contends that because of the possible complications such patients should be hospitalized. However, he will describe in detail certain procedures that he feels are adaptable to office practice. The third surgical discussion will be "Gynecologic Operations," by Dr. F. B. Carter, Durham, N. C. This will concern the uses and abuses of gynecologic surgery, diagnostic operative procedures, and operations for benign and malignant tumors.

The final session on Tuesday will be devoted to

occupational health. Dr. L. C. McGee, medical director of Hercules Powder Company, will discuss "The Scope, Objectives and Functions of Occupational Health Programs." Dr. L. T. Robertson, a member of AAGP and medical director of the Occupation Health Center at Asheville, North Carolina, will talk on "The Family Doctor and the Health Needs of Small Plants." Completing this symposium, Dr. N. J. Roberts, associate medical director for the Standard Oil Company of New Jersey, will discuss "The General Practitioner's Role in the Performance of Periodic Health Examinations." Such examinations, he is convinced, offer unprecedented opportunities in the recognition of unsuspected disease, and stimulate patients as well as educate them about the maintenance of their health.

The first session on Wednesday morning will open with a paper by Dr. H. L. Bockus, Philadelphia, on "Abdominal Conditions Simulating Cardiac Emergencies." Being accurate in one's diagnosis under such conditions is imperative. The second speaker will be Dr. J. H. Spittel, Jr., Rochester, Minn., who will talk on "Thromboembolic Emergencies." A heightened awareness of such possibilities, as well as an ability to recognize and treat the condition, has been one of the steps in the progress of medical science.

The second session of Wednesday morning is to deal with cerebral emergencies. Dr. C. S. MacCarty, Rochester, Minn., will speak on "Traumatic Cerebral Emergencies." He will be followed by Dr. T. S. Fay, Philadelphia, whose topic is to be "Important Signs, Symptoms and Differential Diagnosis." For the general practitioner who is usually the first doctor to see accident cases, a review of cerebral emergencies is certainly in order.

The first session on Wednesday afternoon will be a panel discussion on "Current Concepts in Arthritis." Dr. J. W. Sigler, Detroit, will be moderator, and the participants will be Drs. L. M. Lockie, Buffalo, J. H. Talbott, Buffalo, C. H. Slocumb, Rochester, Minn., and J. L. Hollander, Philadelphia. For this problem of which we know but little, what greater panel could be assembled?

The second session on Wednesday afternoon will feature "The Hematopoietic Diseases," by Dr. Charles A. Doan, Columbus, and "The Detection of Anemia," by Dr. William Dameshek, Boston. Though a vast amount of material has been written on these two subjects, and though the laboratory aids for diagnosing them have been improved, how much do we really know about them?

Thursday morning is to open with a panel discussion of life insurance examinations, their significance and value. Dr. A. L. Larson, Hartford, will be the moderator, and the panel members will be Drs. M. H. Clifford, Cincinnati, E. S. Williams, Richmond, and A. J. Oberlander, Chicago. This discussion will stress the importance of the history and physical examination, as well as the medicolegal aspects of the examination and report.

The second half of the first session concerns "Fall In or Fall Out—a Professional Challenge," and the speaker will be Dr. J. R. Shaeffer, San Antonio. His discussion will cover (1) who will be available to care for the victims, (2) what will be the role of the general practitioner, and (3) how he will proceed with the job.

The final session of Thursday morning—the final one of the Scientific Assembly—will concern mental health. Dr. M. E. Linden, Philadelphia, will discuss "What Is Teachable in Mental Health." Dr. W. B. Terhune, New Canaan, Conn., will speak on "Reeducation in the Doctor's Office." These talks will stress methods that may be used in the doctor's office for reeducating the distressed patient, and the accepted liaison between the physician and civil authorities.

As AAGP Scientific Assemblies have always been, this year's is a star-studded program presented for your benefit. Are you planning to attend?

MAYO CLINICAL REVIEWS

Rochester, Minnesota, April 4, 5 and 6

Staff members of the Mayo Clinic and the Mayo Foundation for Medical Education and Research, again this year, will present a three-day program of lectures and discussions on problems of current interest in general medicine and surgery.

The American Academy of General Practice has told the Committee on Clinical Review that it will allow up to 21 hours of Category I credit to those of its members who attend.

There will be no fees for this program.

The number of physicians who can be accommodated is necessarily limited. Those wishing to attend should communicate immediately with the Clinical Reviews Committee, Mayo Clinic, Rochester, Minnesota.

Plan Now to Attend

the S.U.I.—IAGP

Refresher Course for the General Physician

Iowa City

February 16-19

THE DOCTOR'S BUSINESS



The Effect of Inflation Upon Life Insurance

HOWARD D. BAKER

WATERLOO

The major function of life insurance is to provide *financial protection* for the dependents in the event of the death of the head of a family. The second important function is accomplished by the investment element that is inherent in all insurance policies that provide for cash values.

Most investors recognize that inflation results in a loss of purchasing power for the funds they have put into savings deposits or have paid for bonds and similar fixed investments. However, the data reflecting developments in the life insurance industry strongly indicate that the majority of investors have not yet realized the extent to which prolonged inflation has eroded the savings of life insurance policyholders.

Since 1940, more than $129,000,000,000 of buying power has been lost by policyholders who have misplaced their trust in the depreciating dollar. The following illustrates the year-by-year losses. Over the past 18 years, the buying power of the cash value of a life insurance policy in existence in 1940 has been *halved*. Policyholders who relied upon life insurance to protect their families are thus faced with a choice between two alternatives: (1) to double their life insurance protection, or (2) to risk having their families exist on half as much buying power as they planned to leave them when they bought their insurance policies.

Though a portion of any life insurance program should be made up of permanent, level-premium insurance, the inflation that is bound to continue makes it more and more dangerous for one to place funds in high-premium endowments, annuities and limited-pay insurance plans. Until the economics of life insurance change to keep pace with our economy, more emphasis must be placed upon the purchase of larger and larger amounts of the various types of term protection. A plan of permanent insurance (ordinary or whole-life) for strictly permanent needs, and term insurance for *all temporary* needs must be strictly adhered to.

In addition to maintaining a basic insurance program, it is of utmost importance that the intelligent investor "insure his insurance dollar" by investing as many additional dollars as possible in variable-dollar commitments such as investment funds or other comparable securities. This method of "balancing" will provide at least a degree of protection against the shrinking of dollar values over the years to come.

In this age of declining purchasing power, it becomes doubly important to act upon the advice of competent counsel in all matters. Before embarking upon a full-scale insurance program or making substantial changes in your present program, it will be well worth your while to have a complete review and analysis made of your insurance program and insurance needs.

ANNUAL LOSSES IN INSURANCE VALUES

Year	*Insurance in Force (Billions of Dollars)*	*Per Cent Change in Dollar Value*	*Change in Value (Billions of Dollars)*
1940	111.6	– 1.00	– 1.116
1941	115.5	– 8.93	– 10.314
1942	122.2	– 8.32	– 10.167
1943	127.7	– 3.22	– 4.112
1944	137.2	– 2.10	– 2.881
1945	145.8	– 2.19	– 3.193
1946	151.8	–15.34	– 23.286
1947	170.1	– 8.28	– 14.084
1948	186.0	– 2.72	– 5.059
1949	201.2	+ 1.98	+ 3.984
1950	213.7	– 5.52	– 11.796
1951	234.2	– 5.48	– 12.384
1952	253.1	– 0.88	– 2.227
1953	276.6	– 0.70	– 1.936
1954	304.3	+ 0.52	+ 1.582
1955	333.7	– 0.35	– 1.168
1956	372.3	– 2.80	– 10.424
1957	412.6	– 2.96	– 12.213
1958	458.4	– 1.70	– 7.793
		Total	. . .–129.037

IOWA STATE MEDICAL SOCIETY

Organized in 1850

1960 ANNUAL MEETING

April 24-27

Veterans Memorial Auditorium

Des Moines



Veterans Memorial Auditorium



JOHN W. BILLINGSLEY, M.D.

President
Iowa State Medical Society
1959-1960

General Sessions

General Sessions Room, Exhibit Hall

Monday Morning, April 25

MEDICINE & SPORTS

8:00 Exhibits

8:55 Invocation

The Reverend Mr. Clifford B. Lott, Associate Pastor, Grace Methodist Church, Des Moines

9:00 Opening Remarks

Forest Evashevski, Head Coach, Football, State University of Iowa, Iowa City

9:10 "Frequency and Nature of Athletic Injuries"

Thomas B. Quigley, M.D., Boston, Massachusetts

9:20 Symposium: "Ankle Injuries"

Eugene F. Van Epps, M.D., Iowa City, Moderator

Thomas B. Quigley, M.D., Boston, Massachusetts

Joseph H. Burnett, M.D., Boston, Massachusetts

R. A. McGuigan, M.D., Winnetka, Illinois

William D. Paul, M.D., Iowa City

10:30 Exhibits

11:15 "Sports for Children"

R. A. McGuigan, M.D., Winnetka, Illinois

11:45 "Prevention and Treatment of Injuries in Football in the Boston High Schools"

Joseph H. Burnett, M.D., Boston, Massachusetts

Monday Afternoon, April 25

12:15 Lunch

2:00 President's Address
John W. Billingsley, M.D., Newton

2:30 "Physical Therapy for Athletic Injuries in High School Programs"

Terry B. Jones, R.P.T., Iowa City

3:00 Exhibits

3:45 "Management of Ankle Injuries Sustained in Sports"

Thomas B. Quigley, M.D., Boston, Massachusetts

4:15 "Skin Problems of Athletes"

Christian E. Radcliffe, M.D., Iowa City

4:45 "Protective Taping in Athletic Programs"

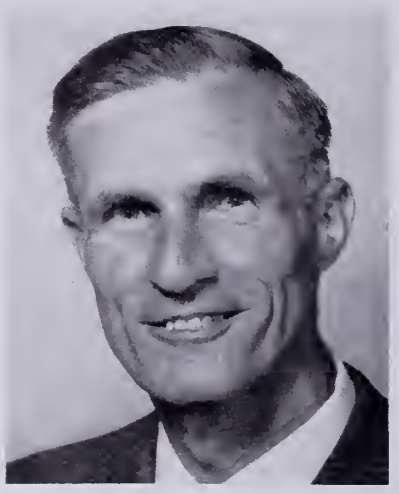
William D. Paul, M.D., Iowa City

Doyle Allsup, Iowa City

The scientific program will be acceptable to the American Academy of General Practice for 10 hours of Category II credit.

ISMS HEADQUARTERS HOTEL

HOTEL SAVERY
LOCUST AT FOURTH STREET





*Mr. **Doyle Allsup**, of Iowa City (left), is trainer in the Athletic Department at the State University of Iowa. **Hillier L. Baker, Jr.**, M.D., of Rochester, Minnesota (center), is a consultant in diagnostic roentgenology at the Mayo Clinic, and an instructor in the University of Minnesota Graduate School for Medical Education and Research. **Joseph H. Burnett, M.D.**, of Boston (right), is assistant professor for the teaching of fractures at the Boston University School of Medicine and "Games Surgeon" for the high schools of the City of Boston.*





*Mr. **Forest Evashevski**, of Iowa City (left), is head football coach at the State University of Iowa. **John W. Green, Jr.**, M.D., of Des Moines (center), is chief pathologist at Iowa Methodist Hospital. **John Gustafson**, M.D., of Des Moines (right), is director of the United Heart Station at Iowa Methodist Hospital, and president of the Polk County Heart Council.*

General Sessions (Continued)

Tuesday Morning, April 26

CIRCULATORY SYSTEM

8:00 Exhibits

9:00 Symposium: "Modern Concepts in Coronary Artery Disease—Their Practical Applications"
Lee F. Hill, M.D., Des Moines, Moderator
Harry B. Weinberg, M.D., Davenport, "How to Diagnose Coronary Heart Disease"
Benjamin Manchester, M.D., Washington, D. C., "Management of the Coronary Patient"
Frederick J. Stare, M.D., Boston, Massachusetts, "Is There an Escape From Coronary Artery Disease?"
Lewis E. January, M.D., Iowa City, Summary
(A Question and Answer Period Will Follow the Symposium)

10:30 Exhibits

11:15 "The Heart Murmur—(Is It Serious, Doctor?)"
John Gustafson, M.D., Des Moines

11:45 "The Visualization of the Vascular System"—(The Arthur Erskine Memorial Lecture)
Hillier L. Baker, Jr., M.D., Rochester, Minnesota

Attend the
PRESIDENT'S RECEPTION
and
ANNUAL BANQUET

Tuesday, April 26—Hotel Savery
Reception, 6 p.m.—Des Moines Room
Banquet, 7 p.m.—Terrace Room
Tickets for Sale at Registration Desk

(Blue Shield, celebrating its Fifteenth Anniversary, is arranging the reception in honor of John W. Billingsley, M.D., I.S.M.S. President, and a member of the Blue Shield Board of Directors for 15 years.)

Tuesday Afternoon, April 26

12:15 Lunch

2:00 "Heart Disease in Pregnancy"
Roy G. Holly, M.D., Omaha, Nebraska

2:30 "Blood Transfusion Reactions: A Decreasing but Important Medical Problem"
John W. Green, Jr., M.D., Des Moines

3:00 Exhibits

3:45 Symposium: "Vascular Lesions"
Walter M. Kirkendall, M.D., Iowa City, Moderator
Robert G. Siekert, M.D., Rochester, Minnesota, "The Stroke—Diagnosis and Therapy"
Robert L. Grissom, M.D., Omaha, Nebraska, "Medical Therapy of Peripheral Vascular Disease"
E. S. Brintnall, M.D., Iowa City, "The Role of the Surgeon in Atherosclerosis"
(A Question and Answer Period Will Follow the Symposium)

Wednesday Morning, April 27

8:00 Exhibits

11:00 Special Address
Leonard W. Larson, M.D., Bismarck, North Dakota, Chairman, Board of Trustees, American Medical Association

11:30 Report of the House of Delegates
Installation of President

Space Is Available for
Additional Scientific Exhibits
Address: J. T. McMillan, M.D.
529 Thirty-sixth Street, Des Moines 12





Roy G. Holly, *M.D., of Omaha (left), is professor and chairman of the Department of Obstetrics and Gynecology at the University of Nebraska College of Medicine.* ***Terry B. Jones,*** *R.P.T. (center), is head physical therapist in the Department of Physical Therapy at S.U.I. Hospitals, and instructor in the School of Physical Therapy at the S.U.I. College of Medicine.* ***Leonard W. Larson,*** *M.D., of Bismarck, North Dakota (right), is chairman of the Board of Trustees of the American Medical Association.*





R. A. McGuigan, *M.D., of Winnetka, Illinois (left), is a member of the School Health Committee of the American Academy of Pediatrics, an associate in pediatrics at the Northwestern University Medical School and medical advisor in the public schools of Evanston, Illinois.* ***William D. Paul,*** *M.D., of Iowa City (center), is a professor of internal medicine and director of the Polio and Rehabilitation Unit at the S.U.I. College of Medicine.* ***Thomas B. Quigley,*** *M.D., of Boston (right), is an assistant clinical professor of surgery at the Harvard Medical School.*

Special Meetings and Dinners

Sunday, April 24

STATE SOCIETY OF IOWA MEDICAL WOMEN

and

AMERICAN MEDICAL WOMEN'S ASSOCIATION, BRANCH 19

The Annual Meeting of the State Society of Iowa Medical Women and American Medical Women's Association, Branch 19, will be held at the home of Dr. Evlyn Anderson, 637 Forty-Second Street, Des Moines, on Sunday, April 24, at 7:30 p.m. "Current Legislation Affecting Medical Practice" will be discussed. All women who are members of, or eligible for membership in, the Iowa State Medical Society are urged to make plans to attend this meeting.

GOLF TOURNAMENT

The Annual Golf Tournament will be held in Des Moines on Sunday, April 24, at the Wakonda Club. Physicians may begin play at any time during the day, but the majority will start at 1 p.m. Dinner and awarding of prizes will follow. Reservations should be made with Dr. Harold J. McCoy, 212 Bankers Trust Building, Des Moines, Iowa.

Attend the

BLUE SHIELD FORUM

of

PARTICIPATING PHYSICIANS

Wednesday, April 27—10 a.m.

General Sessions Room, Exhibit Hall
Veterans Memorial Auditorium

Monday, April 25

IOWA ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

Wakonda Club

Business Meeting—6 p.m.

Social Hour and Dinner—6:30 p.m.

Reservations: A. H. Downing, M.D.

616 Bankers Trust Building, Des Moines 9

IOWA ACADEMY OF SURGEONS

Wakonda Club

Business Meeting—6 p.m.

Social Hour and Dinner—7 p.m.

Reservations: R. B. Stickler, M.D.

1401 Woodland Avenue, Des Moines 14

IOWA ASSOCIATION OF PATHOLOGISTS

AND

IOWA SOCIETY OF MEDICAL TECHNOLOGISTS

Hermitage Room—Des Moines Club

Social Hour and Dinner—6:30 p.m.

Reservations: Wallace Rindskopf, M.D.

Iowa Lutheran Hospital, Des Moines 16





Christian E. Radcliffe, *M.D., of Iowa City (left), is an associate professor of dermatology and syphilology at the S.U.I. College of Medicine.* ***Eugene F. Van Epps,*** *M.D., of Iowa City (right), is professor and head of the Department of Radiology at the S.U.I. College of Medicine, and president-elect of the Iowa State Medical Society.*

Symposium on Modern Concepts in Coronary Artery Disease—Their Practical Applications











Lee F. Hill, *M.D., of Des Moines (upper left), will be the moderator. He is chief of the pediatrics staff at the Raymond Blank Memorial Hospital for Children.* ***Lewis E. January,*** *M.D., of Iowa City (left center), is a professor of medicine at the S.U.I. College of Medicine, and a member of the Executive Committee and Board of Directors of the Iowa Heart Association.* ***Benjamin Manchester,*** *M.D., of Washington, D. C. (right center), is an assistant clinical professor of medicine at the George Washington University School of Medicine, and president of the District of Columbia chapter of the American Society of Internal Medicine.* ***Fredrick J. Stare,*** *M.D., of Boston (right), is professor and chairman of the Department of Nutrition at Harvard University, and editor of* NUTRITION REVIEWS. ***Harry B. Weinberg,*** *M.D., of Davenport (lower left), is chief of medical service at Mercy Hospital, Davenport, and a member of the Boards of Directors of the Iowa and American Heart Associations.*

Special Meetings and Dinners (Continued)

IOWA DERMATOLOGICAL SOCIETY

Pioneer Room—Des Moines Club
Social Hour and Dinner—6 p.m.
Reservations: Robert G. Carney, M.D.
University Hospitals, Iowa City

IOWA NEUROPSYCHIATRIC SOCIETY

Iowa Room—Hotel Savery
Social Hour—6 p.m.; Dinner—7 p.m.
Guest Speaker: G. Wilse Robinson, Jr., M.D.
Kansas City, Missouri, Governor of the
American Psychiatric Association
Reservations: H. C. Merillat, M.D.
2801 Woodland Avenue, Des Moines 12

IOWA ORTHOPEDIC SOCIETY

South Room—Des Moines Club
Dinner—6:30 p.m.
Reservations: John Kelley, M.D.
1401 Woodland Avenue, Des Moines 14

IOWA RADIOLOGICAL SOCIETY

Colonial Room—Des Moines Club
Business Meeting—5 p.m.
Social Hour—6:30 p.m.; Dinner—7:30 p.m.
Reservations: J. T. McMillan, M.D.
1105 Bankers Trust Building, Des Moines 9

IOWA SOCIETY OF ANESTHESIOLOGISTS

Social Hour, Parlors C and D—Hotel Savery
6 p.m.
Dinner, West Room—7 p.m.
Guest Speaker: J. J. Jacoby, M.D., Milwaukee,
Wisconsin, Chief of Anesthesiology,
Marquette University School of Medicine
Reservations: J. F. Throckmorton, M.D.
1201 64th Street, Des Moines 12

PAST PRESIDENTS' DINNER

Parlors A and B—Hotel Savery
Dinner—7 p.m.

Tuesday, April 26

LEGISLATIVE CONTACT MEN

Des Moines Room—Hotel Savery
Breakfast—7:30 a.m.

PRESIDENT'S RECEPTION AND ANNUAL BANQUET

Hotel Savery
Reception, 6 p.m.—Des Moines Room
Banquet, 7 p.m.—Terrace Room

BENEFIT DANCE

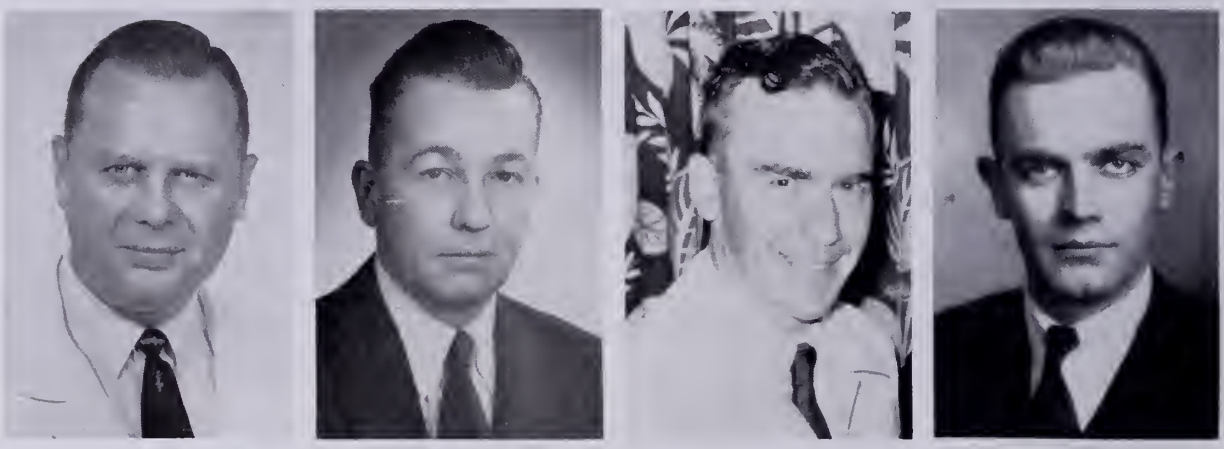
Spring Frolic
Grand Ballroom—Hotel Savery—9 p.m.
Evan Morgan's Orchestra
Sponsored by the Woman's Auxiliary for the
Benefit of Its Health Educational Loan Fund
Reservations: Mrs. H. W. Smith, Woodward

Wednesday, April 27

BLUE SHIELD PARTICIPATING PHYSICIANS

Blue Shield Forum—General Sessions Room
Exhibit Hall, Auditorium, 10 a.m.

Symposium on Vascular Lesions



Walter M. Kirkendall, *M.D., of Iowa City (left), will be the moderator. He is director of the Cardiovascular Research Laboratories and a professor of internal medicine at the S.U.I. College of Medicine.* ***Edgar S. Brintnall,*** *M.D., of Iowa City (left center), is chief of surgery at the Veterans Administration Hospital there, and a professor of surgery at the S.U.I. College of Medicine.* ***Robert L. Grissom,*** *M.D., of Omaha (right center), is professor and chairman of the Department of Internal Medicine at the University of Nebraska College of Medicine.* ***Robert G. Siekert,*** *M.D., of Rochester, Minnesota (right), is a consultant in neurology at the Mayo Clinic, and an assistant professor of neurology in the Graduate School of the University of Minnesota.*

ISMS Program Committee



From left to right in the top row are ***Carroll O. Adams,*** *M.D., Mason City;* ***Charles J. Baker,*** *M.D., Fort Dodge;* ***Walter J. Balzer,*** *M.D., Davenport;* ***Alson E. Braley,*** *M.D., Iowa City; and* ***Paul T. Cash,*** *M.D., Des Moines.*

In the bottom row, are ***John S. Greenleaf,*** *M.D., Iowa City;* ***Frank R. Peterson,*** *M.D., Cedar Rapids;* ***Clement A. Sones,*** *M.D., Des Moines; and* ***Jack V. Treynor,*** *M.D., Council Bluffs.*

The House of Delegates

Open to all members

SPEAKER

First Meeting—Sunday
April 24, 10:00 a.m.
South Room, Veterans Memorial Auditorium

Roll Call

Approval of the Minutes of the Meeting Held on April 22, 1959

Reports of Officers

Reports of Committee Chairmen

Memorials and Communications

New Business



C. V. Edwards, M.D.

Second Meeting—Wednesday
April 27, 7:30 a.m.
General Sessions Room
Exhibit Hall
Veterans Memorial Auditorium

Roll Call
Reading of Minutes
Report of Committee on Nominations
Election of Officers
Reports of Committees
Unfinished Business
New Business
President-Elect's Address
Announcements
Adjournment

SCIENTIFIC EXHIBITS

State University of Iowa College of Medicine

COLLEGE OF MEDICINE ADMINISTRATION—Miss Alice White, College of Medicine

CHAMBER ANGLE ANOMALIES IN DEVELOPMENTAL GLAUCOMA AND IN SYSTEMIC MESODERMAL DISORDERS—Hermann M. Burian, M.D., Gunter K. von Noorden, M.D., Mr. Lee Allen, Department of Ophthalmology; and Ignacio V. Ponseti, M.D., Department of Orthopedic Surgery

CLEFT LIP AND PALATE REHABILITATION—Department of Otolaryngology and Maxillofacial Surgery

SALVAGE OF THE RHEUMATOID HAND—Adrian E. Flatt, M.D., Department of Orthopedic Surgery

RESEARCH IN PSYCHIATRY—Psychopathic Hospital

PROTECTIVE EQUIPMENT USED IN ATHLETICS—William D. Paul, M.D., Rehabilitation Unit

PREVENTION AND TREATMENT OF ANKLE SPRAINS—William D. Paul, M.D., Rehabilitation Unit

Veterans Administration Hospital, Iowa City

A PRIMER ON RADIATION HAZARDS—Richard E. Peterson, M.D., Medical Service; Richard L. Lawton, M.D., Surgical Service; and Donald V. Walz, M.D., Laboratory Service.

BLOOD TRANSFUSION: ITS USES AND ABUSES—Richard E. Peterson, M.D., Medical Service; Richard L. Lawton, M.D., Surgical Service; and Donald V. Walz, M.D., Laboratory Service

Veterans Administration Center, Des Moines

ANTRECTOMY WITH VAGECTOMY FOR CHRONIC DUODENAL ULCER—Louis T. Palumbo, M.D., Wendell S. Sharpe, M.D., Donald J. Lulu, M.D., and Raymond Vespa, M.D., Surgical Service

ROENTGEN ANATOMY OF THE CERVICAL SPINE—Paul J. Trier, M.D., W. Wayne Sands, M.D., and Byron Augspurger, M.D., Radiology Service

General

THE AMERICAN CANCER SOCIETY'S PUBLIC EDUCATION PROGRAM FOR CANCER CONTROL—American Cancer Society, Iowa Division

CAUSES OF BLINDNESS AMONG CHILDREN—Iowa Committee, National Society for the Prevention of Blindness

ASSOCIATION OF AMERICAN PHYSICIANS & SURGEONS, INC.—Arranged through Wapello County Medical Society

INTRA- AND EXTRAOCULAR ALLERGY—Leland H. Prewitt, M.D., Ottumwa

VITAL STATISTICS—Iowa State Department of Health, Division of Vital Statistics

ACUTE RHEUMATIC FEVER—RHEUMATIC HEART DISEASE—DIABETES SCREENING—GLAUCOMA STUDY—Iowa State Department of Health, Division of Gerontology, Heart and Chronic Diseases

"HOW SPECIFIC ARE YOU IN WRITING DIET ORDERS?"—Iowa State Department of Health, Nutrition Service

IOWA DIVISION OF VOCATIONAL REHABILITATION—Iowa Department of Public Instruction, Division of Vocational Rehabilitation

CONSERVATION OF HEARING—Iowa State Department of Health, Committee on Conservation of Hearing in Iowa

POLK COUNTY POLIOMYELITIS EPIDEMIC—1959—Des Moines-Polk County Health Department

POLK COUNTY MEDICAL SOCIETY

CRIPPLED CHILDREN AND ADULTS—Polk County Society for Crippled Children and Adults

REHABILITATION OF POLIOMYELITIS PATIENTS—Younker Memorial Rehabilitation Center, Iowa Methodist Hospital

MYASTHENIA GRAVIS—Iowa Chapter, Myasthenia Gravis Foundation

THREE GREAT CRIPPLERS—The National Foundation
IOWA HEART ASSOCIATION
MODERN PHARMACY—Iowa Pharmaceutical Association
DIFFERENTIAL DIAGNOSIS IN PULMONARY DISEASE—Iowa Trudeau Society
IOWA CHAPTER OF THE AMERICAN ACADEMY OF GENERAL PRACTICE
ADOPTION AND RELATED SERVICES—Iowa Children's Home Society
IOWA ASSOCIATION OF MEDICAL ASSISTANTS
AUTOMATION IN THE CLINICAL LABORATORY—Iowa Society of Medical Technologists
IOWA SOCIETY OF X-RAY TECHNICIANS
YOUR OFFICE AND PHYSICAL THERAPY—American Physical Therapy Association, Iowa Chapter
LAPIDARY FOR REHABILITATION AND HOBBY—John K. Uchiyama, M.D.; Charlotte Fisk, M.D.; Younker Memorial Rehabilitation Center; and Des Moines Lapidary Society

TECHNICAL EXHIBITORS

Abbott Laboratories, North Chicago, Illinois
American Cancer Society, Iowa Division, Mason City, Iowa
Audio-Digest Foundation, Glendale, California
Baker Laboratories, Inc., Cleveland, Ohio
Benson Optical Company, Minneapolis, Minnesota
Blue Cross-Blue Shield Plans, Des Moines-Sioux City
Book House for Children, Lake Bluff, Illinois
George A. Breon & Company, New York, New York
Carnation Company, Los Angeles, California
CIBA Pharmaceutical Products, Inc., Summit, New Jersey
Cusack-Harmon Company, Sioux City, Iowa
Desitin Chemical Company, Providence, Rhode Island
Diamond Laboratories Company, Des Moines, Iowa
Dictaphone Corporation, New York, New York
Doho Chemical Corporation, New York, New York
Eaton Laboratories, Norwich, New York
Emanem Laboratories, Inc., Chicago, Illinois
Encyclopaedia Britannica, Inc., Minneapolis, Minnesota
Endo Laboratories, Richmond Hill, New York
Marshall Erdman & Associates, Inc., Madison, Wisconsin
Foot-so-Port Shoe Company, Waterloo, Iowa
Geigy Pharmaceuticals, Yonkers, New York
General Electric Company, X-Ray Dept., Des Moines, Iowa
General Investors Planning Corporation, Des Moines, Iowa
Holland-Rantos Company, Inc., New York, New York
Holmes, Prouty, Murphy & May, Des Moines, Iowa
House of Vision, Inc., Chicago, Illinois
Iowa Physicians Political League, Des Moines, Iowa
Koch Brothers, Des Moines, Iowa
Lederle Laboratories Division, American Cyanamid Co., Pearl River, New York
Eli Lilly and Company, Indianapolis, Indiana
Marion Laboratories, Inc., Kansas City, Missouri
S. E. Massengill Company, Kansas City, Missouri
Mastertapes Music, Inc., West Des Moines, Iowa
Mead Johnson & Company, Evansville, Indiana
Medical Protective Company, Fort Wayne, Indiana
Merck Sharp & Dohme, Philadelphia, Pennsylvania
Merrill Lynch, Pierce, Fenner & Smith, Inc., Des Moines, Iowa
Milex Products, Peoria, Illinois
C. V. Mosby Company, St. Louis, Missouri
National Dairy Council—Iowa Program, Des Moines, Iowa
National Drug Company, Philadelphia, Pennsylvania
Parke, Davis & Company, Detroit, Michigan
Pepsi-Cola Bottlers of Iowa, Des Moines, Iowa
Pet Milk Company, St. Louis, Missouri
Pfizer Laboratories, Brooklyn, New York
Physicians & Hospitals Supply Company, Minneapolis, Minnesota
Picker X-Ray, Midwest, Inc., Sioux City, Iowa
Purdue Frederick Company, New York, New York
A. H. Robins Company, Inc., Richmond, Virginia
Robinson Wholesale Company, Des Moines, Iowa
Roche Laboratories, Nutley, New Jersey
J. B. Roerig & Company, New York, New York
William H. Rorer, Inc., Philadelphia, Pennsylvania
Ross Laboratories, Columbus, Ohio
Sanborn Company, Waltham, Massachusetts
Sandoz Pharmaceuticals, Hanover, New Jersey
W. B. Saunders Company, Philadelphia, Pennsylvania
Schering Corporation, Bloomfield, New Jersey
Julius Schmid, Inc., New York, New York
Sealy Mattress Company, Des Moines, Iowa
G. D. Searle & Company, Chicago, Illinois
Security Laboratories, Burlington, Iowa
Smith, Kline & French Laboratories, Philadelphia, Pennsylvania
E. R. Squibb & Sons, New York, New York
Standard Medical & Surgical Company, Des Moines, Iowa
Stuart Company, Pasadena, California
Ray Trautman and Son, Inc., Marshalltown, Iowa
S. J. Tutag & Company, Detroit, Michigan
Ulmer Pharmacal Company, Minneapolis, Minnesota
Upjohn Company, Kalamazoo, Michigan
U. S. Vitamin & Pharmaceutical Corporation, New York, New York
Warner-Chilcott Laboratories, Morris Plains, New Jersey
Warren-Teed Products Company, Columbus, Ohio
Westwood Pharmaceuticals, Buffalo, New York
Whylie-Farrell, Inc., Des Moines, Iowa
Winthrop Laboratories, New York, New York

Scientific Articles

The Diagnosis of Maxillofacial Injury

KENDALL R. BURNS, M.D.

SIOUX FALLS, SOUTH DAKOTA

THE PURPOSE OF this paper is to emphasize the importance of physical examination in the precise determination of injury in patients who have sustained maxillofacial trauma. There is a popular misconception that x-ray of facial bones is the first and most helpful diagnostic tool available to the surgeon, but actually a good physical examination will yield him more accurate information without delaying emergency treatment. The x-ray of facial bones must be assigned its proper function—that of providing confirmatory and supplementary information.

THREATS TO LIFE MUST BE RULED OUT

Examination of the patient with maxillofacial trauma begins, like all other examinations, with an evaluation of his general condition. Shock *must* be recognized, its cause must be determined and appropriate measures for terminating it must be undertaken immediately. Brain or cervical cord injury is frequently associated with the types of impact which cause maxillofacial injuries, and thus it must be ruled out. If central nervous system injury cannot be excluded immediately, continued observation of the patient must take precedence over maxillofacial reconstruction.

Partial or complete airway occlusion, or direct pulmonary injury, frequently occurs in patients with maxillofacial injury, and just as frequently it is the cause of the patient's poor general condition when he is first seen. A patent airway, in such instances, must be the surgeon's primary concern. Subsequently, he must avoid forcing contaminated material into the lacerated soft tissues or subarachnoid space, and he can take precautions against doing so by administering oxygen and anesthetic gases through an endotracheal tube or a tracheostomy only.

The associated injuries and disabilities that I have just discussed must be recognized and corrected, for they represent fundamental prerequisites to a good maxillofacial examination.

THE FRACTURES MUST BE FOUND AND ASSESSED

The regional examination of the patient with facial injury should always begin with inspection and palpation of the calvarium, forehead and scalp. Injuries in this area are easily missed if the examiner is quick to begin concentrating his attention upon the area of grossly apparent injury. At this time he should examine the tympani by otoscope, the pupils and eyeballs by direct vision, and the nasal contents for cerebrospinal fluid. A serosanguineous discharge should alert him to the possibility of basal skull fracture, and lead him to modify his plan of management accordingly.

Fracture of the anterior wall of the frontal sinus and superior orbital ridge is often obscured by associated hematoma or emphysema in the subcutaneous tissues. This impediment to examination can usually be overcome by anchoring the calvarium with one hand and palpating the orbital ridge between the thumb and index finger of the other hand. At the same time, with one hand still immobilizing the calvarium, one can test the bridge of the nose for mobility due to fracture. The medial and inferior orbital margins are then palpated with the index finger for irregularity indicating a nasomaxillary fracture in the first-mentioned quadrant, and a recessed maxilla or displaced zygoma fractures in the inferior orbital quadrant.

Dr. Burns made this presentation at the meeting of the Cerro Gordo County Medical Society, in Mason City, on October 13, 1959.

The lateral orbital margins are examined between the index finger and the thumb, and one must keep two points in mind. First, mobility of the bone of the lateral orbital ridge is present when direct, small-area impact has resulted in a chip or semi-lunar fracture fragment of this structure. Second, the zygomatico-frontal suture line is widened, or irregular, in displaced fracture of the zygoma. Comparison with the characteristics of the contralateral suture line will lend a high degree of specificity to this diagnostic point. Further, the degree and direction of displacement of the fractured zygoma can be very accurately estimated by comparing, by means of the palpating finger, the degree and direction of irregularity present at the inferior orbital ridge, malar arch and zygomatico-frontal suture lines. This observation is dependable, however, only after examination of the maxilla has proved that this bone has not been displaced as a unit.

At this point, it is also important that the examiner be unimpressed by the absence, presence or degree of associated diplopia. Diplopia *per se* is not a dependable criterion of displacement, or conversely its absence a measure of the integrity of the orbital floor in the first week following trauma. Neither is the absence of diplopia during the early postoperative period an assurance that anatomic reduction has been accomplished.

Visual examination of the nose from full-face, profile and end-on aspects is next in order. Symmetry of nostrils and luxation of nasal septum should be checked. Supplemental palpation will inform one of nasal, nasomaxillary process and anterior nasal spine fracture.

The oral cavity must be carefully explored by direct vision and palpating finger. Dental malocclusion empirically commands the examiner to find fractures to account for the abnormality. Open-bite and posterior displaced mandible suggest ramus or condylar fractures. Prognathic malocclusion of mandible may be the first hint of a recessed, impacted maxilla. Preexistent prognathism can usually be confirmed by history-taking from the patient or his family, or by photographs.

Dental fractures should be recognized and recorded at this time. A record of fractured, diseased or missing teeth is invaluable to the surgeon when he is planning the reduction and immobilization of facial fractures. The surgeon should examine the patient's mouth thoroughly, to satisfy himself that no fragments of teeth or dentures remain imbedded in the soft tissues.

The examining fingers should next survey the entire available mandible within the mouth, covering both lingual and labio-buccal surfaces of ramus, body and arch. The posterior border of the mandibular ramus is palpated at the same time from the exterior. Bone irregularity or mobility is easily recognized throughout the mandible proper. Fractures of the coronoid and condylar processes, however, frequently must be diagnosed from palpable, localized hematoma or point tenderness, since crepitation in fractures of these sites frequently is not demonstrated. Experienced palpation of the temporo-mandibular joint, malar tubercule and external auditory canal will add to one's diagnostic information in regard to fractures of the mandibular condyle, malar arch and auditory canal, or temporo-mandibular luxation.

Before extensive digital exploration of the cheeks and floor of the mouth for palpable foreign bodies, the integrity of the hard and soft palates is checked, and the examining finger continues its exploration to the nasopharynx and pharynx. Bimanual examination of the retrotonsillar fossa offers further information about the ramus of the mandible. At this time, the integrity of the base of the skull and the upper cervical vertebrae can be checked by cautious palpation. As previously suggested, the lacerations of the oral soft tissues may now be explored. The pharynx can be immediately suctioned to remove whatever blood was secreted during the examination. All fragments of prosthetic devices or dentures should be saved. A denture may be repairable for use as a splint, or some indication of the shape or some other characteristic of a missing fragment may help in identifying it in x-rays later.

Examination of the maxilla should begin with a check of the teeth for abnormal mobility and displacement. Fracture of the alveolar ridge, producing a semilunar fragment containing a few teeth, is frequently overlooked. Following this procedure, the hard palate and pre-maxillary segment should be rather forcefully checked for mobility. The incisive fossa is carefully palpated for evidence of horizontal or vertical fracture lines. The finger is then passed to the anterior antral wall. Pressure against this portion of maxilla produces crepitation when zygoma fracture is present. A semicircular edge of zygoma is palpable here when the maxilla has been recessed. A horizontal ridge is frequently palpable in this area when transverse fracture of the maxilla has taken place. Abnormal mobility of a part or all of the maxilla is demonstrated if one grasps it between the thumb and index finger of his right hand, while holding the calvarium steady with his left. This test is then repeated with the left hand fixing the bridge of the nose between the index and middle fingers while the left thumb and fifth finger overlie the respective zygomatico-frontal suture lines. A little practice with these tests will readily show the examiner which of the various middle-third facial fractures has occurred. Examination of the bone structures is now concluded with a palpation of the inferior margin of the malar arch, with one finger in the mouth and the opposite hand assisting externally.

GLANDS, NERVES, MUSCLES AND BLOOD SUPPLY MUST BE CHECKED

Evaluation of soft tissue injuries begins with observation of the locations of lacerations and contusions. Is any salivary structure involved? Is the lacrimal system affected? Is soft tissue missing? Are there any narrow bands or flaps of skin with less than optimal blood supply? Do all facial muscles function? If not, which laceration crosses the related branch of facial nerves?

Sensory loss should be checked over the frontal nerve area when lacerations cross this structure. Infraorbital nerve section may be a complication of zygomatic or maxillary fractures, and the expected area of anesthesia is easily demonstrable. It should be remembered, however, that contusion frequently produces anesthesia locally, for variable periods of time. All lacerations must be explored completely. This should be done, however, only under ideal conditions, under general anesthesia and in the operating room at the time of surgical correction of the diagnosed injuries.

CONCLUSION

The physical diagnostic methods that are applicable in cases of maxillofacial injury have been outlined, and a few points of special importance presented. The use of these methods as a basis for obtaining early, accurate diagnostic information has been emphasized. The unfortunately popular tendency for the diagnostician to depend completely upon x-ray studies is to be scorned.

Surgical Conference at Des Moines VA Hospital

The annual Veterans Administration Area Surgical Conference will be held on March 29 and 30, 1960, at Veterans Hospital, Des Moines, bringing together the chiefs of surgical staffs at 21 VA hospitals in an eight-state area for a program of scientific papers and work-progress reports on administrative and research problems.

For the first time in the history of such conferences, the scientific-papers session will be open to all physicians in the area who desire to attend. There will be no charge for registration.

Dr. William S. Middleton, chief medical director, Veterans Administration, Washington, D. C., Dr. Robert T. Tidrick, professor and head of surgery at the S.U.I. College of Medicine, Dr. R. Russell Best, of Omaha, the VA's area consultant in general surgery, and Dr. Lester D. Powell, health director of the Des Moines Public Schools, are among the prominent professional figures who will appear on the program. The complete schedule is as follows:

Tuesday, March 29

8:30 a.m. Registration

9:00 "The Cause and Cure of Esophageal Hiatus Hernia"—William P. Kleitsch, M.D., Omaha.

9:30 "Hiatus Hernia"—Edgar S. Brintnall, M.D., Iowa City

10:45 PANEL: GASTRIC AND DUODENAL ULCER—Drs. Thomas E. Corcoran, Paul J. Trier, Wendell S. Sharpe, and Samuel J. Zoeckler, all of Des Moines, and Dr. Miles B. Smith, Wood, Wisc. Dr. Middleton, moderator.

2:00 p.m. "Experimental Wound Infections"—Donald J. Ferguson, M.D., Minneapolis

2:30 "An Analysis of 10 Cases of Salmonella Infections on a General Surgical Service"—Dr. Smith

3:45 "Management of Surgical Problems of the Geriatric Patient"—Eugene Ittzes, M.D., Hot Springs, South Dakota

4:30 HOSPITAL TOURS

6:30 SOCIAL HOUR

8:00 DINNER

Wednesday, March 30

9:00 a.m. "A Case With Left Ventricular Aneurysm and Surgical Excision Using Heart-Lung Bypass"—John T. Mendenhall, M.D., Madison

9:30 "Antrectomy With Vagectomy for Chronic Duodenal Ulcer"—Donald J. Lulu, M.D., Des Moines

10:45 PANEL: BILIARY TRACT DISEASES—Drs. Alvin S. Aldrich, Cheyenne, Everett R. Maresh, Sioux Falls, Justin A. Phelps, Miles City, Montana, Ralph A. Thomas, Fargo, and Kermit J. Wright, Ft. Harrison, Montana. Dr. Best, moderator

2:00 p.m. PANEL: ADMINISTRATIVE PROBLEMS AND PROGRESS REPORTS—Dr. Oreon K. Timm, St. Paul, and Drs. John A. Kennedy and Lyndon E. Lee, both of Washington, D. C. Dr. Donald McCarthy, St. Paul, moderator.

Experiences in the Surgical Treatment of Peptic Ulcer

B. R. WESTON, M.D., E. H. BARG, M.D., AND J. K. MacGREGOR, M.D.

MASON CITY

AN ANALYSIS OF experience with surgical therapy for peptic ulcer leads one to the conclusion that even though much has been said about this disease and its treatment, our lack of precise knowledge about its etiology and the diversity of subjective responses of patients to each treatment technic must make our conclusions about the preferability of one type of therapy over another quite unreliable. Though one may want very much to remain objective regarding his personal experiences in the treatment of this disease, he has great difficulty in evaluating his results in an individual case, and in addition, variations in the maintenance of patients' records make comparisons difficult. Yet, in spite of these handicaps, there is value in an attempt to analyze personal experiences in the light of the accumulated facts about peptic ulcer diathesis and its treatment.

The purpose of this paper is to present our experience in the surgical treatment of 304 cases of peptic ulcer from January, 1947, to July, 1959.

SURGICAL AS AGAINST MEDICAL MANAGEMENT

At the outset, we wish to acknowledge the excellent material on this subject which is available in standard texts as well as in the current literature. A complete bibliography of it would comprise a volume by itself. We feel most indebted to Drs. J. R. Brooks and F. D. Moore for their intensive analysis of the ulcer problem which appeared under the heading "Medical Progress" in three recent consecutive issues of the NEW ENGLAND JOURNAL OF MEDICINE.

It is particularly interesting to note that these authors, in following the course of patients with peptic ulcer disease over a 12-year period, were able to state that the mortality from the disease, over the long run, was about the same for medically managed and for surgically treated patients. In other words, the mortality rate from hemorrhage and perforation which occur in the older age groups was just as high among medically managed patients as was the mortality among those selected for surgical treatment under adverse conditions. These authors have made an interesting statement: "If a patient has been under a physician's care for many years, and has repeatedly asked whether or not surgery might help him, but has been 'protected' from surgery by that physician, and subsequently dies of a complication of the disease, the physician should step forward and accept the responsibility for mortality with the same candor with which the surgeon accepts the mortality of his post-operative patient who has a pulmonary embolism."

We hope that our findings are presented with this candor. We further agree with Brooks and Moore that there has been a "tendency in the literature on peptic ulcer to compare operations done by various groups under any circumstances. This is not justifiable, as is pointed out in our 1950 report. Each surgical service, operating on patients for peptic ulcer, should review its own results critically, and if *elective* mortality exceeds 3 per cent, some change in procedure is needed." This echoes our feelings with reference to the value of an attempt to analyze our own efforts. Since there is a certain homogeneity in the handling of patients by the surgeons involved, since we have had an excellent opportunity for close follow-up due to the fact that the patients live within relatively easy reach of the hospital in which we work, and since we have had an opportunity for constant cross-consultation and evaluation of patients, we feel that the facts presented are generally accurate and, insofar as possible, unweighted by wishful thinking.

INDICATIONS FOR SURGERY

At present there seems to be little disagreement as to the major indications for the surgical therapy of peptic ulcer, and we have been consistent in following them. These criteria are: (1) intractability, (2) hemorrhage and (3) perforation. Intractability indicates failure of a vigorously supervised effort at medical management over a period long enough to convince the physician that response is poor. This standard is used in evaluating all patients, including those with pyloric obstruction. Acute hemorrhage requiring repeated blood transfusion without response is, of course, a self-evident indication. Perforation *may* indicate a need for primary resection, provided the patient has had a definite history of ulcer disease prior to the perforation, and provided that his general condition is excellent. Preferably, such patients are in the younger age groups.

It is easy to outline criteria such as these, but applying them to individual patients frequently

Drs. Barg and MacGregor made this presentation at the meeting of the Iowa Academy of Surgery, in Iowa City, on October 9, 1959.

leads to disagreement or the selection of improper therapy in a particular instance. The ability of the human being to respond to ulcer management, to be in apparently satisfactory psychic as well as physical shape, or to accept surgery are questions on which opinions can vary to a considerable extent. Like other surgeons, we rely to a considerable extent upon "hunches" and "guesses," and find ourselves "betting" that such and such an individual will or will not benefit greatly from our advice. We may be wrong in our conclusions with reference to any given patient, and have had individuals who had seemed excellent candidates for surgery become post-gastrectomy problems. Conversely, an individual who is apparently a bad risk may do beautifully. Pertinent preoperative evaluation of these patients, other than the efforts of the individual surgeon to analyze the situation, will include the usual x-ray and laboratory studies, of course.

SURGICAL TECHNICS

In discussing the type of surgery carried out in these patients, we should like briefly to review the operative procedures available for the treatment of peptic ulcer, and then refer to the type of procedures which we have used. We believe that simple vagotomy alone is not a valid procedure in the treatment of duodenal ulcer, nor do we feel that the evidence is in favor of vagotomy with gastroenterostomy. Certainly these procedures seem best reserved for individuals who are poor-risk patients. The classic sub-total gastrectomy with removal of 65 to 75 per cent of the distal stomach still seems to be the favored procedure. Most review articles on the subject indicate dissatisfaction with many aspects of resection and quote mortality rates varying from one to six per cent. However, there seems to be agreement that it is still the most widely chosen surgical treatment.

Modifications of this type of gastrectomy have been favored by many surgeons recently, but we are convinced from our experience that such modifications as the Bilroth I, 50 per cent resection with vagotomy leave considerable to be desired. They are still in the process of evaluation at the larger teaching institutions.

RESULTS IN OUR SERIES

In analyzing our own material, we utilized office and hospital records as well as direct mail follow-ups and office interviews. We reviewed the material at hand and drew conclusions with reference to all final results, based on unanimous decision. We downgraded all results where this agreement was not obtained. The tables summarize our findings.

Table 1 reviews the numbers of operations done, year by year, and indicates that gastrectomy for peptic ulcer comprised 1.3 per cent of the total surgical procedures done during the period January, 1947, through July, 1959.

TABLE 1

GASTRIC RESECTIONS, JANUARY, 1947, THROUGH JULY, 1959, REPRESENTING 1.3% OF 22,307 GENERAL SURGICAL PROCEDURES DONE

Year	*Gastric Resections*	*Year*	*Gastric Resections*
1947	11	1954	31
1948	14	1955	23
1949	13	1956	45
1950	24	1957	28
1951	30	1958	31
1952	20	1959 (7 mos.)	14
1953	21		
Total			304

Tables 2 and 3 indicate the distributions of these 304 patients by sex and age. The predominance of males is again noteworthy.

TABLE 2

SEX DISTRIBUTION OF 304 GASTRIC RESECTION PATIENTS

Males	240
Females	64
Total	304

TABLE 3

AGE DISTRIBUTION OF 304 GASTRIC RESECTION PATIENTS

Years of Age	*Number of Patients*
20-30	14
31-40	50
41-50	85
51-60	82
61-70	53
71-80	19
81 and over	1
Total	304

Table 4 shows the sex and age distributions for the 36 cases of gastric ulcer found in this group.

Table 5 lists the types of definitive operative procedures employed in the treatment of the 304 individuals surveyed. Notice that our group uses predominantly a Polya resection, and in almost all instances employed ante-colic anastomoses.

Table 6 indicates other procedures employed for the treatment of peptic ulcer during this period,

TABLE 4

AGE AND SEX DISTRIBUTIONS OF 36 GASTRIC ULCER PATIENTS

Sexes		*Ages*	
Men	25	20-30	1
Women	11	31-40	3
	—	41-50	12
Total	36	51-60	6
		61-70	5
		71-80	9
			—
		Total	36

TABLE 5

METHODS EMPLOYED IN 304 GASTRIC RESECTIONS

Polya	248
Hofmeister	44
Bilroth 1 with vagotomy	10
Sleeve	2
Total	304

and the mortality rate in this group of 54 operative cases is noted to have been 7 per cent. It can be mentioned here that in these cases we were dealing primarily with aged individuals in nonelective situations dictated by such complications as perforation or bleeding. As previously mentioned, these less definitive operations were reserved for the poor-risk patients.

TABLE 6

OTHER OPERATIONS FOR PEPTIC ULCER, JANUARY, 1947, THROUGH JULY, 1959

Simple closures, perforation	17
Gastroenterostomy	15
Gastroenterostomy and closure, perforation	13
Vagotomy	6
Suture excision, bleeding ulcer	3
Total	54
Mortality	4 (7%)

Table 7 indicates a limited experience with marginal ulcers treated during this period. Only two of these cases were reoperation situations from our own experience, and they did not involve anyone reported in the 304 resections. We shall not discuss marginal ulceration further than to say that in the majority of these cases vagotomy and further modification of resection were carried out.

Table 8 briefly reviews the postoperative mortalities in the total group of 304 gastrectomies for peptic ulcer. Note in Table 8 the very high mortality rate in the group receiving or *requiring* resection for perforation. It is noted that two deaths in this group were in extremely elderly individuals in whom some type of resection was *required* simply to allow closure of the perforation. In one woman, there was complete destruction of the entire prepyloric and postpyloric area, with a break down of gastrointestinal wall 2.5 in. in diameter.

In the hemorrhage group, we again point out that these individuals required surgery because of acute, persistent gastrointestinal bleeding. Here again, the mortality figure of 11 per cent indicates the marked increase in mortality when operation is carried out in such patients, despite every effort to prepare them properly for surgery.

TABLE 7

MARGINAL ULCERS REOPERATED, JANUARY, 1947 THROUGH JULY, 1959

Men	8	Previous gastroenterostomy	9
Women	3	Previous Bilroth 1	1
	—	Previous resection and vagotomy	1
Total	11		—
		Total	11

TABLE 8

DEATHS

Indication	*No. of Cases*	*No. of Deaths*	*Per Cent of Deaths*
Perforation	21	4	19
Hemorrhage	45	5	11
Intractability (Includes obstruction)	238	7	2.9
Total	304	16	5.3

CAUSES OF DEATH

Peritonitis	4
Electrolyte imbalance, circulatory overload	3
Myocardial infacts	2
Acute pancreatitis	2
Recurrent hemorrhage	1
Aspiration vomitus-evisceration	1
Endotoxic shock (pseudomonas bacteremia)	1
Pulmonary embolism	1
Unknown	1
Total	16

The majority of these patients were operated upon for intractability, and the death rate in this group (elective procedures) fell within the accepted mortality range. A case-by-case evaluation would require a great deal of space, and the

analysis of all factors involved in each individual death would become extremely complex. Certainly every surgeon is familiar with the great agony that occurs when a patient, apparently an excellent risk with no contraindications, develops postoperative complications leading to death.

Two peritonitis cases were associated with perforation initially. In no case was there a *proved* perforation or "blow-out" of a duodenal stump. Drainage of the duodenal area, with the insertion of a tube, was carried out in 12 cases. Three patients dying of "electrolyte imbalance" or "circulatory overload" were the ones about whom, in the final analysis, we felt most distressed. Here, inadequate management—usually delayed gastric emptying in spite of electrolyte determinations and controlled replacement—was the apparent cause of death. The deaths due to myocardial infarction, acute pancreatitis, recurrent hemorrhage, aspiration of vomitus following evisceration, endotoxic shock and pulmonary embolus seem virtually self-explanatory. One death was unexplained, but may have been associated with a breakdown of the duodenal closure, though generalized peritonitis was not evident.

The evaluation of significant complications in the surviving patients listed in Table 9 is, in general, self-explanatory. We are certain that many of the relatively minor complications were not properly recorded, but we feel in general that this group is representative of the types of problems occurring after any major surgical procedure. The category "wound infections" appears self-explanatory. "Cardiac complications" should be taken as referring to individuals who developed auricular fibrillation or had apparent mild infarcts from which they recovered. "Postoperative small-bowel obstruction" refers to frank intestinal obstruction requiring reoperation and release of the obstruction. In one individual, this was the result of occlusion of the bowel by a through-and-through retention wire. Postoperative anastomotic obstruction required reoperation in six instances, the majority of them in the earlier years covered by this report. At present, we delay reoperation in such cases as long as the individual can be maintained satisfactorily on parenteral therapy.

Prolonged duodenal drainage occurred in three patients who had had open treatment of the duodenum, rather than attempted closure in the face of severe inflammation.

Individuals requiring reoperation for postoperative hemorrhage were those whose submucosal vessels at the site of anastomosis continued to bleed. Patients requiring multiple transfusions but not reoperation caused us more than their proportional shares of anxiety.

Pseudomonas and staphylococcal bacteremia occurred in two individuals, and their survival is at least partially attributable to vigorous antibiotic therapy and the use of *hypothermic* management. The patient with pseudomonas bacteremia presented a truly complex problem in management and survival.

TABLE 9

COMPLICATIONS ENCOUNTERED BY THE SURVIVING GROUP OF PATIENTS

	No. of Patients
Wound infection	9
Post-op. anastomotic obstruction requiring reoperation	6
Cardiac complications	4
Post-op. small-bowel obstruction	3
Prolonged duodenal drainage	3
Post-op. hemorrhage requiring reoperation	3
Post-op. hemorrhage not requiring reoperation	3
Pseudomonas bacteremia	1
Staphylococcal septicemia	1
Psychosis	1
Evisceration	1
Micrococcus enteritis	1
Thrombophlebitis	1
Total	37 (12.8%)

EVALUATION OF OUR RESULTS

In Table 10, we attempt to evaluate our results in 205 patients with adequate follow-up for the years 1947 through 1957. In an effort to be as objective as possible, we debated a great deal as to just what criteria should be utilized in determining the meaning of "good," "fair" and "poor" results. Here again, the subjectiveness of the discussion and the disagreement as to what might constitute such a result in one person's eyes but not in another's become important. As far as we are concerned, results are "good" when the operation has been performed with adequate indication, and when the patient has had an essentially uncomplicated postoperative course, or at least has survived major complications, has returned to an active, normal life and has remained free of an ulcer problem. These individuals have stated frequently in their follow-up letters that they hadn't "felt so good in 35 years," were "enjoying life for the first time" or "hadn't realized how sick" they had been. Again, the evaluating surgeons had to be completely in agreement that a result was a good one before it could be classified as such. In general terms, we can say that the 154 individuals listed as having "good" results are people who have regained their weight and who carry on normal activities.

Thirty-one patients whose results have been classified as "fair" did not have courses that were

as satisfactory as we had hoped to obtain. They frequently complained of mild dumping syndrome for as long as several years after surgery, though they carried on essentially normal activity. It was our impression that those individuals with Hofmeister anastomoses had done somewhat better than the ones with simple Polya anastomoses, but the numbers of cases were too small for completely adequate evaluation.

The results classed as "poor" were those of individuals who gave us the subjective report that they were no better than they had been before their operations. From a surgical standpoint, we felt that most of these people were at least no worse than before surgery, but they continued to complain of pain, inability to gain weight, failure to eat an adequate diet and, in many instances, recurrent vomiting. Repeat x-rays in these individuals have consistently failed to demonstrate marginal ulceration, nor was there any obstruction of the anastomoses.

In attempting to compare the results of surgical treatment with the results of medical management we are at a loss as to just how significant the figure of 75 per cent "good" results in cases selected for surgery may compare with similar cases medically managed.

TABLE 10

RESULTS OF SURGERY FOR GASTRIC AND DUODENAL ULCER, 1947 THROUGH 1957

205 CASES WITH ADEQUATE FOLLOW-UP

	Good	*Fair*	*Poor*	*Total*
Polya	126 (73%)	29 (17%)	17 (10%)	172
Hofmeister	21 (92%)	2 (4%)	2 (4%)	25
Billroth I with vagotomy	7 (100%)	0	0	7
Sleeve	0	0	1 (100%)	1
Total	154 (75%)	31 (15%)	20 (10%)	205

RESULTS OF SURGERY FOR GASTRIC ULCER, 1947 THROUGH 1957

Polya and Hofmeister	18 (76%)	4 (17%)	2 (7%)	24

CONCLUSIONS

Our conclusions in reviewing the analysis of 304 cases of gastric resection, during an 11½-year period, with adequate follow-up in 205 cases during a 10-year period, are as follows:

(1) Careful selection of patients for surgical management in peptic ulcer is mandatory. The basic criteria have been outlined above.

(2) The 65 to 75 per cent standard gastrectomy is probably still the treatment of choice in the hands of individuals with adequate surgical training.

(3) A mortality rate of 2.9 per cent in elective cases is noted.

(4) There is a marked increase in mortality when the procedure is applied to treatment necessitated by more emergent situations such as perforation or bleeding from peptic ulcer.

(5) Analysis of follow-up results in this small series indicates 75 per cent "good" results in individuals who preoperatively had been leading markedly restricted lives as a result of their disease. Add this to 15 per cent "fair" results, and there has been significant benefit for 90 per cent of the surviving individuals selected for surgery.

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FILM ON CONGESTIVE HEART FAILURE

"Congestive Heart Failure," a 10-minute sound film in color just released by Merck Sharp & Dohme, can be obtained through the AMA Film Library in Chicago or from the company for showings on television or to nurses, medical students or lay groups, or especially to patients suffering from the ailment. The company also has available an illustrated brochure which contains the entire narration script of the film.

Technical advice for "Congestive Heart Failure" was furnished by Dr. William D. Stroud, professor emeritus of cardiology at the Graduate School of Medicine at the University of Pennsylvania. The film has the approval of the AMA.

Animation is used to acquaint the victims of the disease with the normal functions of the heart and to show them what happens to it under stress. It is pointed out that with proper care a patient with congestive heart failure has a good prospect of returning to a relatively normal life.

Portacaval Shunt for Bleeding Esophageal Varices

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IN THIS PAPER, we propose to discuss briefly the current concept of the pathogenesis of portal hypertension with esophageal varices, and to report the results obtained in a group of patients so treated on the Surgical Services of the State University of Iowa.

CAUSES

Any mechanism which impedes the flow of blood in the portal system can presumably produce the syndrome of portal hypertension with congestive splenomegaly, esophageal varices, ascites and depression of the formed blood elements. Most often, portal hypertension is encountered in the various forms of cirrhosis which produce intrahepatic blockage, and less often in portal or splenic thrombosis, compression, cavernous transformation, etc., where the blockage is extrahepatic.[1-3] It should be pointed out, however, that many cases with portal hypertension have been reported which do not fit into this convenient classification.[4, 5] In these cases, the portal hypertension and esophageal varices appear unrelated to portal block, and the mechanisms usually implicated in the pathogenesis of esophageal varices do not square with the clinical findings. There are also other observations which suggest that the problem is much more complex. These include: unexplained natural fluctuations in portal tension, the association of esophageal varices with splenic or hepatic arteriovenous fistulae, and the development of esophageal varices without portal hypertension. The issues and the conflicting ideas in the concept of portal hypertension are ably considered in a recent survey by Nachlas.[6]

It has been suggested that the esophageal varices represent collateral conduits which become dilated from a sustained increase in hydrostatic pressure when blood is conveyed from the high-pressure portal system to the low-pressure systemic system.[7, 8] Other factors are also implicated: The submucosal veins of the esophagus are easily dilated because they lie in a bed of relatively poor supporting tissue; the differences between abdominal and thoracic pressure incident to breathing and other stresses may also influence the development of venous dilatation.[9] Furthermore, since the lower esophagus is exposed to gastric juice, esophagitis, variceal erosion, rupture and hemorrhage are likely to occur. Although these hypotheses are plausible and widely accepted, we are not aware of any convincing clinical or experimental evidence that would lead us to accept them *in toto*.

TREATMENT

But as is true in other areas of medicine, one does not have to know the cause before he can treat the condition. The same situation obtains in many surgical problems—in peptic ulcer, ulcerative colitis, thyroid diseases and cancer, to name but a few. In portal hypertension from whatever cause, veno-venous shunts to decrease the pressure in the portal system have been done long enough and often enough to establish this method as the best treatment currently available.[10, 11] When one is faced with a patient with ruptured esophageal varices and massive bleeding, the problem is to control the bleeding promptly and to prevent recurrent bleeding. The latter can be achieved by making an anastomosis between the portal and systemic veins sufficiently large to allow a good run-off and to effect decompression of the portal system. If such a shunt can be maintained indefinitely without causing damage to the liver or otherwise adversely affecting the general well-being of the patient, the treatment can be said to be effective. It should be pointed out,

TABLE I

PROCEDURES UTLIZED IN CONTROLLING BLEEDING FROM ESOPHAGEAL VARICES

Balloon tamponade (Sengstaken-Blakemore tube or one of its modifications)
Injection of varices with sclerosing solutions
Ligation of varices, transesophageal
Interruption of arterial supply to liver or spleen
Transection of the cardiac end of the stomach
Resection of gastro-esophageal area, with reanastomosis
Excision of the spleen
Veno-venous anastomoses
a. splenorenal shunt
b. portacaval shunt

The authors, members of the staff in the Department of Surgery at the S.U.I. College of Medicine, made this presentation at the meeting of the Iowa Academy of Surgery, in Iowa City, on October 9-10, 1959.

however, that the shunting procedures are extensive operations, and since they are usually applied to patients whose homeostatic mechanisms are already severely impaired, the risks of complications and death are understandably high.

The many methods advocated for the control and prevention of bleeding from esophageal varices (Table 1) suggest that none is completely satisfactory. Some of the methods have been tried in the past and all but given up. Today, they are occasionally utilized when the circumstances preclude other alternatives.

Balloon tamponade is of primary value in the temporary control of bleeding from esophageal varices. It is widely used and is generally effective. The directions for the use of the tube, including inflation, anchorage, traction and deflation, should be carefully followed. The hazards associated with the use of these devices are not generally recognized, but they are very real, and fatal complications may ensue.[12] These complications include ulceration, perforation and massive necrosis of the lower esophagus, as well as asphyxia due to impaction of the inflated balloon in the airway following vomiting and dislodgement of the tube. Suffice it to say that whenever esophageal tamponade is used to control bleeding from esophageal varices, it is necessary for one to use great care to see that the patient is not harmed by the device itself. Unless there are unequivocal indications for balloon tamponade of the esophagus, it should not be instituted.

Some years ago, esophageal varices were treated by injection of sclerosing solutions much as were varicose veins of the lower extremities. The injections were done through an esophagoscope under direct vision. The results from this type of treatment were generally unsatisfactory, and sclerosing treatment is little used at the present time.

Emergency ligation or "reefing" of esophageal varices has been advocated for patients who fail to respond to conservative treatment and continue to bleed.[10, 13] The ligation of the esophageal varices is carried out through a transthoracic and transesophageal approach. Our experience with this method of direct attack on the varices has not been satisfactory, and we are not inclined to advocate this approach at the present time.

Ligation of the hepatic artery was advocated several years ago, but was attended by such a high mortality rate from liver necrosis that it has been abandoned. This approach to the problem was based upon the concept that in cirrhosis there is a competition between the portal venous and hepatic arterial inflow to the liver which is reflected in an elevation in the portal venous pressure. According to some studies, when the arterial inflow was cut off by ligation, the competition was eliminated and the portal pressure fell.[14] Although the concept appeared attractive, its application proved impractical because hepatic artery ligation was followed by massive hepatic infarction and death in an inordinate percentage of patients.

Transection of the cardiac end of the stomach results in the interruption of the perigastric, coronary, short gastric and submucosal veins entering the esophageal venous plexus. For a time after interruption, the pressure in esophageal varices is reduced. Later, however, the collateral channels are reestablished, and recurrent bleeding is likely. This method of treatment, then, serves only as a temporary measure for staying variceal hemorrhage and is not a satisfactory form of long-term treatment.

Resection of the upper end of the stomach and the lower end of the esophagus, with esophagogastric anastomosis, is likewise not a very satisfactory type of treatment, but it may become necessary when other forms of treatment fail. The most important disadvantage inherent in this operation relates to the removal of the cardio-esophageal sphincter action, predisposing the patient to acid-peptic reflux that leads to esophagitis, ulceration, hemorrhage and stricture.

Splenectomy has long been practiced for splenic enlargement of portal hypertension. Because the spleen is said to contribute about 30 per cent of the total portal blood flow, excision of the spleen may be expected to produce a significant reduction in portal tension. But experience has shown that any reduction is only transient, and recurrent bleeding from varices after splenectomy is common. This is not true, however, when in congestive splenomegaly the esophageal varices are associated with isolated splenic vein obstructions (e.g., thrombosis, pressure from tumor or cyst, or cavernous transformation) when simple removal of the spleen results in a reduction in portal tension and disappearance of esophageal varices. On the other hand, if the venous blockage extends into the portal system and the liver, the decompression effected by splenectomy alone will be short-lived. For this reason, most surgeons suggest that whenever splenectomy is indicated for portal hypertension, consideration should be given to the establishment of a splenorenal anastomosis at the same time. It must be obvious that the splenic vein becomes thrombosed unless it is used for anastomosis immediately.

Many types of venous shunts have been tried, but only two basic types are widely used at the present time. They include: (a) portacaval—divided peripheral end of portal to vena cava (central end ligated), or side-to-side, and (b) splenorenal—splenectomy with central end of splenic vein to side of left renal vein. The selection of the type of shunt will depend upon many factors related to the patient's age and general condition, size of the vessels, portal pressure, hepatic function, size of spleen and the surgeon's experience. At the present time, we prefer end-to-side rather than side-to-side portacaval anastomoses, believing that the former perhaps favors complete de-

compression of the portal system and ensures continued patency of the shunt.

Most patients who are candidates for this operation are admitted for massive upper-gastrointestinal bleeding. Often they give a history of repeated episodes of vomiting of blood, and exhibit signs of advanced hepatic cirrhosis. Nearly all are admitted to the medical wards, where conservative treatment and diagnostic studies are instituted. During this critical time, some patients will continue to bleed and deteriorate as a result of liver failure and die; some will stop bleeding and become candidates for elective surgery; and a few will stop bleeding temporarily, only to bleed again when the balloon is deflated. The latter are candidates for emergency operations. Here, the situation is critical and the therapeutic problem is most difficult. No matter what the surgeon's advice and treatment may be, he may fail to reverse the downward trend. As a former teacher of ours often remarked with reference to surgery in such cases, "You're damned if you do and damned if you don't."

In general, we advise exploration and portacaval shunting for all patients who have bled from esophageal varices and who exhibit fair to good liver function as measured by bromsulfalein excretion, cephalin-cholesterol flocculation and serum protein levels. The blood volume, blood clotting, blood protein and hemoglobin levels should be normal or near normal. In addition, we should emphasize the need for every reasonable effort at restoring the patient to as near homeostatic balance as possible before subjecting him to operation. We believe also that there is usually a need for a short but intensive period of preoperative preparation, including carbohydrate and protein restitution, oral antibiotic administration (to reduce enteric bacterial content), and restoration of fluid, electrolyte and mineral deficiencies. Every attempt must be made to restore clotting factors to normal.

The surgeon is sometimes forced to undertake emergency operation when the patient continues to bleed and when his condition deteriorates in spite of all efforts to establish a steady state. Under these conditions, one may choose to proceed with the esophageal balloon in place and with blood transfusion running. Hypothermia is is said to be a helpful adjunct in these desperate situations, and has been used successfully in the management of a patient in this series.

As mentioned above, end-to-side portacaval anastomosis is preferred, but in a few instances we have established side-to-side portal vein to inferior vena cava anastomoses and splenorenal shunts. Splenorenal anastomoses are generally smaller than portacaval shunts and are considered less likely to give good run-off and more likely to become thrombosed.

We have not observed deterioration in cerebral function, nor have we observed progressive liver failure after these operations. In some patients there appeared to be some improvement in liver function—probably in spite of the shunt, and attributable no doubt to the regenerative ability of the liver when special attention is given to diet and avoidance of alcohol and other toxic agents.

THE OPERATION

The operation is performed under closed endotracheal anesthesia, and a non-explosive mixture is used. We find the electro-coagulating unit helpful in the control of bleeding from the myriad of vessels often encountered. The patient is placed on the operating table in the lateral oblique position, with the right side up. A right transverse upper-abdominal incision extended into the thorax through the eighth interspace has been used in most cases. If the thoracic extension is required, the right leaf of the diaphragm is divided near the costal margin to allow displacement of the liver upward and to the left, and thus to give access to the structures in the porta hepatis. In our recent cases, however, except when the liver is unusually large, we have not found it necessary to enter the chest cavity and have been able to secure adequate exposure from below. Before manipulation of the viscera, we measure the portal pressure in a mesenteric, omental or gastroepiploic vein, and later repeat the reading after the shunt has been established. In portal hypertension, the portal venous pressure tends to exceed 300 mm. of saline, and a post-shunt fall to 200 mm. or less is considered adequate decompression.

Early in our experience, we performed radiography of the portal system (portography) on all cases during operation. However, the films obtained so often were unsatisfactory and contributed so little to the interpretation and management of the clinical problem that we have largely abandoned operative portography, and now prefer to perform preoperative splenoportography if such studies are indicated.

POSTOPERATIVE COURSE

The patient's course is often smoother than we have expected. When the chest has been opened, atelectasis and incomplete expansion of the lung have sometimes been a problem. In most instances, intercostal tube drainage connected to a water-seal system is used until complete expansion of the lung is demonstrable. Some degree of paralytic ileus is anticipated, and distention can be prevented by continuous nasogastric suction until effective peristaltic activity of the gut returns. A few patients have developed troublesome ascites postoperatively, but have responded to conservative treatment. It appears that patients who have had ascites before operation are quite likely to have a reaccumulation of fluid postoperatively.

Transient jaundice, often of mild degree, has also been observed in some patients.

Two patients had bleeding, apparently from esophageal varices, a few days after leaving the hospital. In each instance, the hemorrhage was not severe, and stopped spontaneously. There were no episodes of recurrent bleeding.

Table 2 lists nine patients in whom the results of the shunting procedure are believed to be good.

TABLE 2

GOOD RESULTS

Patient	*Age*	*Sex*	*Cause of Portal Hypertension*	*Pressure in cm. of Saline*	*Follow-Up in Months*
1. A. I.	64	M	cirrhosis	33-33	42
2. W. I.	51	M	cirrhosis	47-not done	13
3. M. V.*	55	F	cirrhosis	41-19	42
4. B. C.	31	F	cirrhosis	not done	4
5. D. B.*	9	F	cirrhosis	38-22	6
6. M. H.	45	F	cirrhosis	39-44	16
7. W. N.	37	M	cirrhosis	44-27	9
8. R. F.	60	F	sarcoid	33-25	34
9. C. W.	61	M	cirrhosis	37-30	24

* Procedure other than portacaval shunt done; see text.

REMARKS REGARDING ABOVE CASES

1. Esophagram 10 mos. post-op. showed marked regression of varices. No bleeding since operation.

2. Esophagram at 7 mos. showed normal pattern. No bleeding.

3. Recent signs of progressive liver failure. No bleeding.

4. Esophagram at 3 mos. showed large varices had disappeared. No bleeding.

5. Liver still enlarged, but patient doing well. No bleeding.

6. Improvement in liver function postoperatively probably related to abstinence from alcohol.

7. Patient developed rather severe diabetes mellitus 4 mos. post-op. Spider angiomata on back and arms had almost disappeared. Liver was still palpable below right costal margin. Esophagram 4 mos. post-op. showed no varices. No bleeding.

8. Lost to follow-up after 34 mos. Esophagram normal on last visit. No bleeding.

9. Patient was diabetic prior to operation. Post-op. esophagram showed persistent varices. Patient died of hepatoma.

The age listed is the age of the patient at the time of operation. The cause for the portal hypertension in seven of the cases was cirrhosis (either alcoholic or posthepatitic) and in one was sarcoidosis. The portal tension measured at operation is recorded; the first figure is the pre-shunt level, and the second is the post-shunt level. It is apparent that a significant fall in portal pressure was not always obtained. Case 1, for instance, had no measurable change, and Case 6 had a rise. There would seem to be a discrepancy between the change in pressure and the patient's clinical course. The significance of these observations is not readily apparent, and a discussion of this interesting paradox is beyond the scope of this paper.

The longest follow-ups have been 42 months (3½ years), in two cases. None of the patients in this group has had recurrent gastrointestinal bleeding.

The third patient listed had a side-to-side anastomosis without division of the portal vein. This is the only person in this series in whom that was done. A recent follow-up report indicates that she is again showing signs of liver failure.

Case 5, a nine-year-old girl, had hepatic cirrhosis with portal hypertension, congestive splenomegaly with hypersplenism, and esophageal varices. She bled massively, was treated with balloon tamponade and was operated upon. Splenectomy and a splenorenal shunt were performed, but with completion of the end-to-side splenorenal shunt the kidney was found to be infarcted, and because nephrectomy was necessary an end-to-end splenic vein to renal vein anastomosis was established. This appears to have functioned, and there have been no further bleeding episodes. Under these conditions, however, the small size of the vessels makes venous anastomoses difficult, and both immediate and late thromboses are common.

Table 3 presents eight cases in whom the results are regarded as less than optimal, or "fair." We have called the postoperative result "fair" if bleeding occurred following the operation, if jaundice developed and persisted for a prolonged period, or if esophageal varices remained unchanged in the esophagram.

Table 3 is largely self-explanatory, yet a few points need to be clarified. Six of the eight patients had good reductions in portal pressure after shunting, yet the results, for the reasons previously noted, cannot be considered satisfactory.

Case 12 had a splenorenal shunt with a Teflon graft to bridge a distance between the vessels. He recovered from his operation, went on an alcoholic binge and promptly bled again, probably from varices.

In Case 13, the caudate lobe was quite large and an autograft was needed. A segment of left superficial femoral vein was used for this purpose. The patient has bled on at least one occasion since the operation, and it is doubtful that the shunt remains open.

In Case 15, both cirrhosis and thrombosis of the portal vein were encountered. An anastomosis between the superior mesenteric vein and the vena cava was established. Previously, an esophagogastric resection had been done. On two occasions since the shunting operation, there has been

massive gastrointestinal bleeding, thought to arise from ulceration of the distal end of the esophagus associated with esophagitis.

TABLE 3

FAIR RESULTS

Patient	*Age*	*Sex*	*Cause of Portal Hypertension*	*Pressure in cm. of Saline*	*Follow-Up in Months*
10. S. S.	56	F	cirrhosis	38-not done	22
11. E. O.	54	M	cirrhosis	38-22	9
12. R. K.*	34	M	cirrhosis	42-25	2
13. M. K.*	60	M	cirrhosis	30-15	21
14. F. K.	37	M	Wilson's disease	34-16	23
15. R. H.*	44	M	cirrhosis	27-13	19
16. S. G.*	15	F	cirrhosis	31-31	19

* Procedure other than usual portacaval shunt done; see text.

REMARKS REGARDING ABOVE CASES

10. Patient bled slightly 2 wks. post-op. Esophagram 3 mos. post-op. showed persistent varices. No further bleeding.

11. Developed signs of hepatic failure post-op. Recovered satisfactorily. No further bleeding.

12. Bled shortly after discharge from hospital following alcoholic binge.

13. Esophagram 1 mo. post-op. showed persistent varices. Had episode of GI bleeding 15 mos. post-op.

14. Jaundice persisted for over 6 mos. following portacaval shunt. No further bleeding.

15. Had previous esophagogastric resection and developed an ulcer at the junction of the anastomosis. Probably bled from this area 17 mos. after shunting procedure.

16. Esophagram 7 mos. after operation showed persistent large varices. Splenorenal shunt probably thrombosed. Portacaval shunt may be considered if bleeding recurs.

Case 16 was a 15-year-old girl with portal hypertension and bleeding varices. Splenectomy and splenorenal shunt were performed. Although there was no fall in portal pressure, there has been no further bleeding, and the patient leads an active and apparently normal life. The varices, however, are prominent in the esophagram, and probably represent a real threat to life. It is quite likely that portacaval shunting will become necessary.

Table 4 lists four cases in whom the outcome from operation was unsatisfactory.

Case 17, a nine-year-old girl, had previously had a splenectomy for portal hypertension and hypersplenism. There was no evidence of cirrhosis or varices. Two years later, she suddenly bled from esophageal varices, and at operation a malformation of the portal vein was encountered. A portal collateral about 8 mm. in diameter was anastomosed to the vena cava. The patient did well for five months, then exhibited recurrent severe bleeding for which an esophagogastric resection was carried out. There has been no subsequent bleeding episode.

Case 18 was operated upon after prolonged bleeding with signs of progressive liver failure. His condition was less than optimal, but he went through the operation without difficulty. An unexplained increase in portal pressure was observed immediately following the shunt. Massive bleeding from erosion of the esophagus, probably associated with balloon tamponade, led to death six days after the operation. At autopsy, the anastomosis was adequate and patent.

Case 19 was a 33-year-old man with alcoholic cirrhosis in whom technical difficulties encountered at the time of operation led to excessive blood loss. Jaundice developed and became progressively more severe until death from liver failure occurred 15 days after operation. It is not clear whether death resulted from operative injury to the bile duct system or from shock, transfusion reaction or a combination of circumstances.

Case 20 was a 49-year-old man who was operated upon after failure of conservative management. In spite of adequate decompression as indicated by portal manometry, bleeding continued and the patient died from aspiration of vomited blood on the eighth day. At autopsy, the portacaval

TABLE 4

POOR RESULTS

Patient	*Age*	*Sex*	*Cause of Portal Hypertension*	*Pressure in cm. of Saline*	*Follow-Up in Months*
17. M. J.*	9	F	congenital malformation of portal vein	28-27	13
18. W. D.	70	M	cirrhosis	33-40	died 6 days post-op.
19. S. Y.	33	M	cirrhosis	44-24	died 15 days post-op.
20. J. C.	49	M	cirrhosis	50-6	died 8 days post-op.

* Procedure other than usual portacaval shunt.

REMARKS REGARDING ABOVE CASES

17. An esophagogastric resection was required for recurrent esophageal bleeding. Patient was anemic at the time of last visit, but had had no recurrent hemorrhage.

18. The anastomosis was patent at autopsy.

19. No autopsy.

20. The anastomosis was patent at autopsy.

shunt appeared satisfactory, but there were many gastric and esophageal mucosal erosions.

DISCUSSION

Twenty patients with bleeding from esophageal varices (either acute or recurrent) associated with portal hypertension and treated by portal-systemic shunts are included in this study. There were 12 males and eight females. They ranged in age from nine to 70 years. All but two had clinical and pathologic evidence of hepatic cirrhosis; one had sarcoidosis of the liver and spleen, and one had a malformation of the portal vein without evidence of liver involvement. In two patients, it was necessary to use a conduit (vein autograft; Teflon graft) between the portal and caval systems. Both had recurrent bleeding after an apparently satisfactory reduction in portal tension. Similarly, when portal thrombosis made it necessary to utilize the superior mesenteric vein for anastomosis to the vena cava, gastrointestinal bleeding occurred postoperatively. Because the patient had had a previous gastroesophageal resection, acid-peptic esophagitis might be considered the cause of bleeding.

In one patient, carcinoma of the liver (hepatoma) developed, presumably as a complication of cirrhosis, and led to death 22 months after the shunt operation.

Three patients died in the immediate postoperative period, representing a mortality rate of 15 per cent. Death occurred on the sixth and eight postoperative days in two patients who had been operated upon late in the course of acute continuing hemorrhage and under less than ideal conditions. Both had been subjected to protracted conservative treatment for the control of bleeding and hepatic failure. This had proved unsuccessful, and surgery was undertaken as a last resort. In both instances, bleeding recurred, and with it came hepatic coma and death. In retrospect and in the light of these and other experiences, we believe that an earlier, more aggressive operative attack could conceivably have resulted in salvage of these patients. A third patient died of a combination of complications 15 days after operation. Some of the difficulties were predictable; some iatrogenic. It is conceivable that the complications could have been averted and the outcome might have been favorable, had they been analyzed beforehand. This statement is predicated upon the fact that the patient was a young man in good physical condition.

Good results from shunting operations for bleeding esophageal varices appear most likely to occur when the diagnosis is clearcut, when hepatic function is relatively good and when the patient's general condition is stable. Furthermore, when the anatomical arrangement is such as to allow establishment of a direct portacaval anastomosis and when a substantial fall in portal pressure results, the clinical course in terms of absence of bleeding from esophageal varices is likely to be satisfactory.

On the other hand, the results are more likely to be unsatisfactory when the operation is undertaken late in the course of cirrhosis or late in the course of massive and continued bleeding from esophageal varices. When, in the course of conservative treatment, bleeding recurs each time the balloon is deflated, one may anticipate a progressive decline in the general condition and death. Death may result from exsanguination, liver failure, erosions and rupture of the esophagus, aspiration pneumonitis, asphyxia and a host of other complications. Thus, when a test of conservative measures suggests that the situation is not likely to be reversed, the decision for or against surgery must be made and implemented before decompensation of the homeostatic mechanisms occurs.

SUMMARY AND CONCLUSIONS

1. Bleeding from esophageal varices occurs in the syndrome of portal hypertension which is most often encountered in patients with hepatic cirrhosis.

2. The syndrome is said to result from obstruction to the portal system, and the varices are thought to be due to dilatation of collateral veins between the the hypertensive portal system and the normotensive caval system.

3. Several veno-venous shunting operations have been described for decreasing portal pressure and thus preventing bleeding from esophageal varices. The generally favorable results of these operations suggest that they decrease the incidence of serious bleeding.

4. The present study concerns 20 patients subjected to portacaval shunting for bleeding esophageal varices with portal hypertension. The results were considered "good" in 45 per cent; "fair" in 35 per cent; and "unsatisfactory" in 20 per cent (including the operative mortality of 15 per cent). The follow-up period has been brief, however, and a final judgment of the results must be deferred.

5. The need for early operative intervention in patients with severe bleeding from ruptured esophageal varices who fail to respond promptly to balloon tamponade and other non-operative measures is emphasized. In this group, the mortality will be high under any circumstances. We favor emergency portacaval shunting and suggest that hypothermia may prove a helpful adjunct.

6. We believe that current hypotheses regarding pathogenesis of the syndrome of portal hypertension and related phenomena do not square with many clinical observations, and for this reason we suggest that the mechanistic concept needs to be looked at more critically.

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Diagnosis and Treatment of Depression In Office Practice

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IOWA CITY

THE CONDITION of depression is important for everyone in the practice of medicine. It can be extremely difficult to diagnose, and a failure in recognizing it can be fatal. Suicide is one of the most frequent causes of death in this country. Over 20,000 people each year take their own lives, and another 100,000 make the attempt.

DIAGNOSIS

In addition to making the diagnosis of depression, it is just as important to differentiate the mild from the severe type. The mild cases are generally not suicidal, and are amenable to office therapy, but the latter are often suicidal, and office treatment is usually not recommended for them.

Mild Depression. A mild depression may manifest itself in many ways, but the following case history will bring out some of the features. Mrs. Smith, aged 34, describes her symptoms in the following way: "I am not the same as I used to be. I used to like people, and I belonged to a lot of clubs; I enjoyed doing everything. I had lots of pep. I could clean house, work in the office, cook dinner and be ready to go out in the evening. But for the past few weeks I've been tired. I don't enjoy anything, and it doesn't seem to be worth trying. I've been a lot more tense; I have trouble going to sleep at night."

Further questioning often elicits some precipitating event such as a change or loss of job, or an unfortunate end to a love affair.

These patients may present themselves with any number of symptoms, and further questioning will elicit others. In this group we may find some of the following: complaints of nervousness and fatigue, the feeling of being unable to concentrate, a difficulty in remembering or a difficulty in thinking. The patient may complain of being worried all of the time or of not getting a "kick" out of anything. There is often initial insomnia, an inability to enjoy eating as much as formerly, and some weight loss. There may be decreased interest in sex. Anxiety and tension are often present, and there is frequently a history of recent environmental stress.

During the interview, the patient appears fairly normal. He is able to give his history easily and coherently. He appears sad and somewhat tearful, but is not profoundly depressed. He can smile and respond appropriately to the physician. Often he feels better after having had a chance to talk about the way he feels.

Severe Depression. Mr. McDonald is a 58-year-old man who has been nervous almost all of his life. However, in the past three months he has developed a difficulty in getting to sleep at night and has been waking up at 4:00 a.m. He is unable to enjoy eating and has lost 22 lbs. in weight. He has been worrying about his business, although he admits that he has recently been making more money than ever before. The future looks hopeless to him. He admits that he has thought of suicide. He has had feelings of worthlessness, and has wondered whether other people know about all of his past sins and are talking about him.

In his severe depression, the patient is in obvious difficulty. He expresses the idea that the future is hopeless. He has feelings of guilt, and makes such statements as "I am a sinner. It is all my fault. I have ruined my life and my family."

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He will search far into his past for things he has done wrong and enlarge on their importance out of all proportion.

The physical symptoms are very important diagnostic features of severe depression. The patient will describe an initial and terminal sleep disturbance. The terminal sleep disturbance in which the patient awakes at three, four or five in the morning and is unable to go back to sleep is almost pathognomonic of severe depression. Other physical disturbances include poor appetite, dry mouth, blurring of vision, weight loss, constipation, and a diurnal pattern of energy and mood in which the patient feels worse in the morning when he has the whole day ahead of him, but as the day progresses feels increasingly better until by evening he may feel almost normal and can, for example, enjoy his TV set. He may have delusions of a paranoid nature in which people are talking about his sins, about the Devil's getting ready to take him, and about the imminent end of the world.

On physical examination, the severely depressed patient often appears physically ill. He may show evidence of malnutrition and dehydration. His speech and movement may be slow and retarded. He may have difficulty in expressing his thoughts. On the other hand, he may be excessively active and agitated, plucking at his clothes and pacing the floor. Agitation is more common in older patients.

He is unable to shake the depressed mood. He cannot accept reassurances. He feels no better at the conclusion of the interview, and leaves saying, "Nothing can help. It's all my fault, and I've got it coming to me."

INTERVIEWING

The patient seldom comes into the office and says, "I'm depressed." He is much more likely to complain of fatigue, difficulty in concentrating, nervousness or insomnia. Often, he will present somatic complaints of one type or another. Occasionally, he will come in because of a change in his patterns of behavior. A sudden bout of alcoholism may be the result of depression. Occasionally, particularly among older men, the presenting symptom will be one of sudden promiscuity or sexual activity with children.

The patient may be reticent to discuss emotional and mental symptoms, particularly if he is severely depressed and is afraid his physician will think him "insane."

It is much easier to begin questioning him about the possible physical difficulties, for in that area the patient will have no idea of the implications of his answers. Thus, it is fairly easy to elicit a significant pattern of constipation, terminal sleep disturbance, weight loss and eccentric diurnal energy pattern. This constellation almost always indicates depression, and this much can be obtained without alarming the patient.

If the patient does not volunteer more, we must follow the lead to confirm our suspicions. It is better to probe gently and gradually, and to make the questions lead up to the more difficult areas. For example, one might proceed in this order: (1) Do you have difficulty concentrating? (2) Do you enjoy your work? Is it fun to watch TV? (3) How does the future look to you? (4) How do you feel about yourself? (5) How do other people feel about you? (6) Have you ever thought you might be better off dead? (7) Have you thought of suicide? How would you do it? Have you tried it?

The last few questions are ones that physicians are often reticent about asking, for fear of offending the patient. But if one follows the above pattern of gradually leading into the crucial questions, he will seldom get a negative answer if the responses to the preliminary questions have all been affirmative.

Helpful in the diagnosis is the history of previous depression in the patient, and a family history of depression. One must ask whether the patient has had any experience in the recent past that might be responsible for his feeling of depression—events such as the loss of a loved one, failure in business, recent illness, surgery or childbirth. Depression often follows such situations.

When the patient is too defensive and gives negative answers and you are not yet satisfied with the diagnosis, then the family should be questioned. The close relatives' observations of the patient can be diagnostic in themselves.

It must always be remembered that the presence of depression does not rule out organic pathology. Indeed, depression may have been precipitated by, or may be a symptom of, organic disease; for example a carcinoma, brain pathology, blood dyscrasia, or an unusual drug reaction, particularly to cortisone, tranquilizers or sedatives.

DIFFERENTIAL DIAGNOSIS

Depression can be confused with many other mental states, but there are two that will often present the physician with problems in differential diagnosis.

Normal Grief Reaction. Depression, of course, is normal following the loss of a loved one or some other tragic event in a person's life. However, a normal grief reaction does not include delusions, excessive self-incrimination, excessive weight loss or sleep disturbances. It should terminate in about six weeks.

Emotionally Unstable Personality (Hysterical Psychopathology). The patient with this difficulty will be the most difficult to differentiate from a true depressive. He is the person who may threaten suicide in a very dramatic way. He often has a history of several suicide attempts, but somehow has managed not to injure himself seriously. More often than not, the patient is a young man or

woman, and almost always it is quite clear that the near-suicide has been undertaken in an attempt to manipulate the environment in some way. Commonly, the patient has been frustrated in his wishes. The boy cannot have the family car; the girl has been jilted by her boy friend. Usually, a wrist has been slashed with a razor, and an examination of the arms may show "intention" scars where previous attempts have been made. Barbiturates and aspirin are also common, but seldom in a fatal dose. Although these attempts are gestures and suicide is seldom intended, death may occur accidentally, or a true depression may develop in a person who has made such abortive attempts. Consequently, these people cannot be disregarded and must be evaluated individually.

DANGER SIGNALS

There are certain symptoms and signs which usually mean that a serious depression and an impending suicide are present. It should also be added that homicide is not uncommonly committed by a depressed patient. He feels that the whole world is hopeless, that "atomic war is inevitable," and that he might quite benevolently take his family with him when he goes.

1. *A Deep Mood of Depression.* This can be felt by the examiner more clearly than it can ever be explained. The patient will express a feeling that the future is hopeless, that there is no escape and that there is no possibility of help.

2. *Agitation.* This is more dangerous than retardation, for there is energy present. Depressions in older people are more often accompanied by agitation, and we find correspondingly that the older the depressed patient is, the more likely he is to commit suicide.

3. *Severe Hypochondriasis.* When the patient's attention is fixed upon his symptoms, when he feels that he has a hopeless condition like carcinoma, when his somatic symptoms have a bizarre quality—then he is in danger.

4. *Open Talk of Suicide.* This will occur in a calm, determined way, very much unlike the dramatic performance of the hysterical psychopath.

5. *Severe Insomnia.* The patient is getting very little sleep. There is terminal as well as initial insomnia, and the patient is very concerned about it.

6. *Severe Weight Loss.* Losses of 10 to 50 lbs. over a few weeks or months is a bad sign.

7. *Severe Self-Deprecatory Ideas.* These include ideas of sin and the need for punishment.

8. *History of Previous Serious Suicide Attempts.*

9. *Delusions and Hallucinations.* These are usually of self-depreciatory and sometimes paranoid nature. Somatic symptoms may be delusional. For example, the patient may be convinced that he has a hole in his stomach.

When the patient presents any of the above symptoms, or if he develops them during treatment, it is time for the physician to tell his family of the danger and get him into a protected environment where he can be watched and can receive specialized help.

Observing the preceding points will enable the doctor to prevent most suicides. However, there will be patients who succeed in taking their own lives despite all the physician's precautions. They will not present in any of the characteristic ways, they will show none of the danger signs, and yet will commit suicide. We simply do not know enough about these conditions as yet, and we can only do our best.

TREATMENT

There can be little doubt that at the present time we are in the midst of a revolution in the treatment of depression. The "psychic energizers" have provided the generalist with an effective and safe tool with which to treat depressions. These drugs, however, have not replaced the older principles. The maxim "Treat the whole patient" is probably truer in depression than in any other emotional or mental illness. The patient has many symptoms, some of a physical and some of an emotional nature. It is important that all these features be covered. His symptoms must be treated as well as his depression, and the program may include treating him physically and psychologically, as well as working with his family and his environment.

The patient must have a thorough physical examination, and any incidental conditions must be treated. Physical examination, even if the results are negative, will stand one in good stead in his psychological handling of the patient.

The symptoms that are a result of depression must be treated. Anemia is commonly found because of the lack of a sufficient diet. This may be accompanied by malnutrition, and the patient must be encouraged to eat even if he does not enjoy his food, and a vitamin supplement is often necessary. Constipation will often be present, and laxatives and enemas may be necessary to begin regulation. Insomnia will require short-acting drugs for initial insomnia and longer-acting drugs for the terminal type—which, remember, is the more dangerous kind. Chloral hydrate is a useful drug for treating terminal insomnia, although the longer-acting barbiturates can also be used.

The older anti-depressant drugs, although they have a lesser role, should not be forgotten, for they are still very effective and safe in appropriate cases. Sodium amytal, 60 mg. t.i.d., a.c., in combination with Benzedrine, 5 mg. t.i.d., a.c., is often quite effective for the mild type of depression, particularly when tension is present. Dexamyl is also useful, but should be avoided if there is very much anxiety present, since it is a much more stimulating combination.

Tranquilizers should probably never be used in the treatment of a depressed patient. They may result in the relief of agitation, but often produce a deepening depression. Meprobamate by itself or in combination with other drugs has been reported as effective, but certainly should be confined to the treatment of the mild depression, and does not appear to be as effective as the newer psychic energizers.

The first of the new drugs was Iproniazid, which appeared to be quite effective but unfortunately produced many side effects, some of which were quite dangerous and even fatal. Consequently, it has been replaced by other amine oxidase inhibitors that seem to be more effective and certainly are much safer.

A brief review of the new amine oxidase inhibitors is indicated. However, it must be remembered that most of them have not been used very extensively and they must continue to be prescribed with caution.

Niamid. The usual dose is from 50 to 200 mg. daily, and it can be combined with a barbiturate or phenothiazine to eliminate some of the side effects. The side effects are not common, but from one to four per cent of patients will report dryness of the mouth, epigastric pain, constipation and insomnia. There may be some hyperreflexia, paresthesias, headache and vertigo. There is usually a response in 10 to 14 days. Improvement has been reported in about 72 per cent of the patients treated.

Nardil. The dose is 15 mg. t.i.d., initially, and it can be lowered to a maintenance dose of as low as 15 mg. per day, once improvement has been attained. Side effects are unusual, but postural hypotension may occur, as well as some nausea, ankle edema and delayed micturition. Results of over 80 per cent have been reported.

Marplan. The dosage is 10 mg. t.i.d., initially, and it can be reduced as soon as results become apparent. Usually about two weeks elapse before clinical improvement is observable, and often the interval is longer. Some of the side effects are orthostatic hypotension, constipation and occasional overactivity. Jitteriness and insomnia may occur. The improvement rate has been about 67 per cent.

Catron. The usual dosage is 12 mg. once daily until improvement occurs. Then the dose should be reduced to 6 mg. or less daily. Usually about two weeks elapse before improvement appears.

The literature recommends caution. Catron potentiates many drugs, and it is doubtful that it should be used in conjunction with any other medication. There is a danger of orthostatic hypotension, particularly in older patients. A color-vision defect has been reported occasionally, and the drug should be discontinued if this occurs. A series of side effects are constipation, delay in micturition, increased sweating, hyperreflexia and blurring of vision.

In summary, one can say that the amine oxidase inhibitors are effective in 70 to 80 per cent of depressions. The drugs take anywhere from a few days to a few weeks to produce results, and serious complications are unusual. However, one should still use these new preparations with great care. The dosage should be lowered to maintenance levels as soon as symptoms improve. Liver function tests should be carried out periodically, as should blood counts. Patients with any history of liver disease should probably not receive them. They should probably not be used with epileptic patients, or if they are used, great care should be exercised. A combination of amine oxidase inhibitors with other drugs must be used with caution—particularly a combination with alcohol, ether, barbiturates, procaine or cocaine.

In addition to the amine oxidase inhibitors, there is another "psychic energizer" that is chemically different. This is Tofranil (imipramine), a drug described as a thymoleptic. Its mode of action is unknown. The initial dosage is usually about 75 mg. per day, and it may be increased to 150 mg. per day. The maintenance dose is considerably lower, and must be found by trial and error. The results reported have been from 70 to 85 per cent in all types of depressions. There are several side reactions, but they appear to be minor. These are dry mouth, tachycardia, constipation, and occasionally tremor, sweating, dizziness and urinary frequency. It does not appear to potentiate other drugs. It usually requires a few days to two weeks to produce improvement.

Discontinuing treatment as soon as the patient is well will often result in relapses. Generally, one should maintain the drug for at least two to to three weeks after the cessation of symptoms, and one may need to continue a maintenance dose for several months.

PSYCHOTHERAPY

In spite of the effectiveness of the new drugs, psychotherapy has just as great a role in the treatment of depressions as ever before.

First, the physician must establish rapport. This is simply a feeling of sympathetic, mutual relationship between patient and physician. Rapport must go both ways. The physician must be certain and sure of himself. He should have carried out the diagnostic procedures that he feels necessary so that he can reassure the patient of his findings. He must be genuinely interested in the patient and must be sensitive to the patient's feelings. It is important that he remain calm and relaxed, and that he neither condone nor condemn anything that the patient may tell him. He must be sincere, but not glib or smooth. He should be direct and firm, but not dictatorial. It is im-

portant that he remain objective and not become excessively involved in or overwhelmed by the patient's feelings and problems.

At the outset, the patient is frightened and mixed up. He is alone and he feels guilty. Simply having an interested person listen to him and accept what he is saying often affords him great relief. It is best for the doctor to let the patient talk out his troubles, within the limits of the doctor's time. The fewer the interruptions, the better. Encourage the patient to go beyond his symptoms and to discuss his difficulties at home and anything else that may have contributed to his illness.

It is important to let the patient know what is happening. Reassure him that his disease is not a mental one, that he is not "insane" and though you realize he is very uncomfortable, you feel sure that he will definitely get well. Explain his physical symptoms in simple physiological terms, and answer any questions you can in a direct and reassuring manner.

During the first interview, it is important for the physician to formulate his own concept of treatment, the medication that will be necessary and the things he thinks the patient should do. He should then go over this with the patient in great detail. This not only clarifies the doctor's own thinking but makes the patient realize that the doctor understands his illness, can explain it and can do something about it.

The patient is often indecisive, has lost his self-confidence and is inclined to withdraw. He needs help and direct guidance. Encourage the normal routine of the patient. Bed rest or a trip is seldom helpful, and often aggravates the depression by allowing him more time to ruminate about his troubles. He should continue to work and carry out his social obligations, even though he may not enjoy them at all. Moderate physical activity should be encouraged even where it is not a part of the normal routine. If the patient's social life is lacking, it should be increased. He should visit old friends and carry out activities in which he has found security in the past. It is very important that the patient avoid making any big decisions such as divorce or a job change during the course of this illness. The decision may be a correct one, but more often the decision will be made in the light of his depression and will be regretted later on.

SUMMARY

Depressions are a constant responsibility of the practicing physician. Diagnosis and evaluation are of utmost importance, and the danger of suicide must not be forgotten. The "psychic energizers" have provided the family physician with a very effective new tool, but let us not forget the art of medicine for which these patients have the greatest need.

There are few things more gratifying in medicine than taking part in the recovery of a depressed patient.

Iowa Heart Association Activities

The Iowa Heart Association and the State Nursing Home Operators Association aim to improve care for and understanding of cardiovascular patients in public and private nursing and custodial homes through district educational institutes. Institutes have already been held in Council Bluffs, Sioux City, Fort Dodge and Waterloo with the latest one in Des Moines, February 9.

This program functions on the basis of making the most of the facilities and personnel available. Cooperation of local physicians has been enthusiastic. Considerable emphasis is given in these conferences to proper bed care, proper diet, dealing with psychological problems, and the value of positioning, movement, and exercise in maintaining or restoring physical activity. A demonstration by a physical therapist highlights each of the institutes.

The interest and enthusiasm of the nursing home personnel manifests their need and desire to improve their services.

A cooperative program in low-sodium diet instruction for hospital dietiticians and food-service supervisors has been undertaken by the district hospital associations, the Nutrition Division of the State Department of Health and the councils of the Iowa Heart Association. The most recent conference was held January 21, 1960, at the Kirkwood Hotel in Des Moines under the auspices of the Polk County Heart Council.

Featured speakers were Miss Beth Heap, Washington, D. C., chief nutrition consultant of the Heart Disease Control Program, who co-authored the three low-sodium diets of the American Heart Association, and Dr. Harold Margulies, an internist in Des Moines, who presented "The Doctor's Point of View—and Use of the Heart Association's Sodium Restricted Diets."

The purposes of these conferences (13 are being held) are to improve understanding and communication on diet for heart patients, and to bring about some standardization of terminology and procedure along the lines of the Heart Association's booklets. Low-sodium booklets are being made available to all physicians and hospitals in Iowa.

State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 52-YEAR-OLD WOMAN was admitted to University Hospitals on April 8, 1959, because of hematemesis. Three days before her admission, she had suddenly felt faint and found it necessary to lie down. Shortly thereafter, she had vomited bright red blood. Her family physician had then been called, and he gave her "a shot." A few hours later, she again vomited bright red blood, and was taken to a nearby hospital where she received two units of blood. Two days before her admission here, she managed to eat oatmeal gruel and milk without difficulty. The day before her admission, she again vomited bright red blood, and was given a unit of blood. On the day of admission, she tolerated milk and Jello.

On admission, it was noted that she was pale, but in no distress. She stated that she had had three dark tarry stools with her present illness. She denied any history of jaundice, alcohol intake or gastrointestinal symptoms. At 12 years of age she had had rheumatic fever, and for the past 19 years she had had rheumatoid arthritis. For the latter complaint, she had taken 20 mg. of prednisone per day for a period of two months, four years before her admission.

In 1954, she had been seen at University Hospitals because of a weight loss of 23 lbs. in five months. Physical findings at that time included a diffuse goiter, atrial fibrillation, early congestive heart failure with pneumonia of the left lower lobe and rheumatoid arthritis. The hemoglobin was 10 Gm./100 cc. Treatment consisted of 200 cc. of packed cells, Tapazole, Lugol's solution, digitoxin, barbiturates and antibiotics. One month later, she developed a granulocytopenia, and the Tapazole was discontinued and 7.7 mc. of radioactive iodine was given her over the following week. Her condition improved, and she was discharged, only to return six weeks later because of tachycardia and an exacerbation of her symptoms of thyrotoxicosis. She was discharged three months later, after receiving 10.85 mc. of I^{131}. She returned in two months for another 6.0 mc. of I^{131}. On a return visit in October, 1955, she was found to be euthyroid, and she was not seen again until April 8, 1959.

In the Surgical Outclinic, a physical examination revealed a pale woman with a pulse of 108 per minute, blood pressure of 110/70 mm. Hg., and respirations of 14 per minute. Positive findings included a slight cardiac enlargement (less than in 1954 and 1955), and infrequent premature systolic beats, but an otherwise normal sinus rhythm. Laboratory studies revealed a hemoglobin of 6.6 Gm./100 cc., a hematocrit of 23 per cent, a white blood cell count of 6,000/cu. mm., and normal electrolytes except for the serum chloride measurement of 110 mEq.

A Wangensteen suction was started. There was a return of red blood, and shortly afterward the patient vomited approximately 500 cc. of bright red blood and developed shock. Her blood pressure was 80/? mm. Hg. A cut down was performed, and three units of blood were given immediately. The blood pressure rose, and she vomited 200 cc. of blood. By 1700 hrs., her blood pressure had stabilized at 136/90 mm. Hg., with a pulse of 100 beats per minute. An esophagoscopy was done, revealing fresh blood in the entire esophagus and a fold in the posterior wall of the esophagus at the gastroesophageal junction.

The patient was then taken to the operating room, where she received nine units of blood over a four hour period. During the exploratory procedure, a 3 cm. rent in the distal end of the posterior wall of the esophagus was found and closed. A transverse division of the upper one-third of the stomach was performed, with re-anastomosis, liver biopsy and colon deflation. Her condition at the close of those procedures was fair.

The next day, her condition was good until 2300 hrs., when her temperature was 103°F. The physical examination was negative, except for abdominal distention which was relieved by a rectal tube. Laboratory studies showed a hemoglobin of 18.0 Gm./100 cc. of blood, white blood cells 5,000/cu. mm., and platelets 34,000/cu. mm. The following morning, she was afebrile but slightly dyspneic. Her abdomen was still distended. Three days postoperatively, slight cyanosis of the lips was noted at noon, and a portable chest film revealed bilateral pleural effusion, with the trachea shifted to the right. The dyspnea and cyanosis progressed, and at 1800 hrs. oxygen was started. Her pulse rate declined from 140 to 120 per minute. At 2000 hrs., coarse rales, clear frothy sputum, and pitting edema of the sacrum were found on physical examination. By means of phlebotomy, 150 cc. of blood was removed. A medical consultant at midnight found the blood pressure to be 110/95 mm. Hg., and the pulse 120 per minute. He recommended phlebotomy of 800 cc., digitalization, and 2 cc. of mercuhydrin. By 1000 hrs. the next day, there was no longer any cyanosis, but the blood pressure had again fallen. One million units of penicillin and 100 mg. of Solu-Cortef were given intravenously in a liter of 5 per cent

dextrose in water. An ampule of Levophed was added to the intravenous later. At 1130 hrs., the tracheobronchial tree was suctioned, but the return was only minimal. At 1420 hrs., the patient suffered a convulsion and was pronounced dead a minute or two later.

Miss Patricia Nell, Senior Medical Student: The clinical pathologic conference today is sponsored by the Student American Medical Association, and is to be presented by members of the Senior Class of the S.U.I. College of Medicine. David Wetrich will present the case. Dean Nierling will discuss the pathology, and Roger Newton will discuss the roentgenograms.

The program has a twofold purpose: (1) to give the seniors an opportunity to present and participate in a clinical pathologic conference and (2) to encourage spontaneous discussion from the students.

The injections that the patient received were vitamin K and Adrenosem salicylate. There have been a number of questions pertaining to how long the patient received the digitoxin. It was started in December, 1954, and was continued until the early part of October, 1955. The patient received adrenal cortical steroids for 1½ to 2 months in 1955.

Mr. David Wetrich, Senior Medical Student: I was flattered when Miss Nell invited me, about three weeks ago, to discuss this case, but as I thought over the conferences I had attended, I had some doubts about undertaking the task. It seemed that the cases that had been presented were quite bizarre, and it also seemed that the protocols had contained just about enough irrelevant material and lacked just enough pertinent data to lead the discussant completely astray. But despite my misgivings, here I am.

The 52-year-old woman whose case we are to discuss today had a story which might be thought of as three separate episodes. The first one took place in 1954-1955, when she was seen and treated here for thyrotoxicosis. The second episode was in April of this year, when she developed massive upper gastrointestinal hemorrhage and hematemesis, and underwent an operative procedure. The third episode might be thought of as the four-day postoperative course that ended in her death.

The first episode, in 1954-1955, seems to me to have been a rather typical thyrotoxicosis, and it was treated successfully with I^{131}. The only remarkable feature would seem to be the fact that the patient had some hepatic manifestations that one sees noted at the end of the protocol. There were quite a few of them: thymol turbidity, zinc flocculation, cephalin flocculation, all elevated during this period. Cholesterol levels were not particularly remarkable. The plasma protein showed some decrease in albumin and increase in globulin. The BSP and van den Bergh tests were normal. Also, one can see that the liver was considerably enlarged, except at the termination of her therapy. I think the most likely explanation for these changes in liver function is that they were a result of her severe thyrotoxicosis. That condition can produce deleterious effects on the liver in several ways. The general hypermetabolic state results in a glycogen depletion of the liver, and in a relative malnutrition of the liver and body.

This woman had a 23 lb. weight loss, from 99 down to 76 lbs. I think this is evidence of a relative state of malnutrition. Also, there was an accompanying congestive heart failure which produced an added burden of anoxia upon the liver. The net result of these factors frequently is some degree of fatty degeneration and infiltration. In the most severe cases, this could even go on to produce a cirrhotic process in the liver, or at least there have been scattered reports in the literature of such a consequence in severe thyrotoxicosis. I'd like to think that these hepato-toxic manifestations were due to her thyrotoxicosis.

Other possible causes of her liver damage are infectious or toxic hepatitis or alcoholic malnutrition, but I don't think we have any information that would suggest them. Indeed, the protocol contains the blanket statement that the patient denied any history of jaundice, alcohol intake or gastrointestinal symptoms.

This woman's story continues with an account of the onset of massive upper-gastrointestinal hemorrhage in April of this year. The key to this episode seems to be contained in the description of esophagoscopy and the description of the operation. The protocol says that on esophagoscopy a fold on the posterior wall of the esophagus at the gastroesophageal junction was seen, and that during the operation a 3 cm. rent in the posterior wall of the distal esophagus was found and closed. I would presume that those descriptions are of the same thing, or at least that the phenomena described were in the same location.

The differential diagnosis of this rent would have had to include three possibilities. First would be a mucosal laceration of the gastroesophageal junction secondary to forceful vomiting. This goes under the name of the Mallory-Weiss syndrome. Second would be a so-called spontaneous rupture of the esophagus secondary to vomiting. This lesion usually occurs in the lower esophagus and is a complete rupture through the esophageal wall. The third possibility would be a traumatic rupture by the esophagoscope during esophagoscopy. I think all three of these are worth considering, but I would tend to favor the Mallory-Weiss type of mucosal laceration. The location of this rent at the gastroesophageal junction is very typical of that seen in the Mallory-Weiss syndrome. The other two possibilities typically involve a rupture completely through the wall of the esophagus, and in either of them one usually

would find evidence of air, blood or gastric contents in the mediastinum and pleural cavity. I don't think we have been told of any such findings in this case. The operative procedure described does not seem particularly appropriate if that sort of thing were present. All in all, I think the Mallory-Weiss type of laceration seems the most likely possibility.

The operative procedure which has been described suggests that in addition to the rent there were other significant lesions present. We read that after the rent had been repaired, a transverse division of the stomach was done, and a liver biopsy was taken. A gastric procedure of this type is sometimes done here as a treatment for bleeding esophageal varices, and the taking of a liver biopsy suggests the presence of cirrhosis. Thus, I would like to speculate that bleeding varices were present. I believe that these may have led to the vomiting which, in turn, produced the esophageal laceration. If cirrhosis were indeed present, I think we would have to go back to the patient's thyrotoxic episode to explain the etiology, for we don't really have anything else to suggest as a cause for the liver damage.

I can't completely rule out other causes of upper-gastrointestinal bleeding. Peptic ulcer, which is by far the most common cause of upper-GI bleeding, is not suggested by any prior ulcer symptoms in this case, although the possibility is not thus ruled out. There is a history of adrenal steroid administration, which often leads to peptic ulceration. However, the patient's steroid therapy had been brief and had terminated four years before the bleeding episode. Thus, I don't think it would have been a likely cause. There is nothing to indicate malignancy of the stomach or esophagus. The liver biopsy might suggest that a metastatic lesion of the liver had been found or suspected, but if there were an obvious primary in the stomach or esophagus, a biopsy wouldn't seem to have been the appropriate thing to do. Also, the operative procedure described in the protocol doesn't seem especially appropriate if an ulcer or malignancy were present.

The third stage of this woman's course was her postoperative period. The first facts we need to note are her temperature of 103°F. and her 18 Gm. hemoglobin on the first postoperative day. The fever suggests the presence of pulmonary complications—perhaps some atelectasis or pneumonitis. The 18 Gm. hemoglobin is very remarkable in view of the fact that on the day before, prior to her surgery, she had had a hemoglobin value of 6.6 Gm. After the 6.6 Gm. value was reported, we read that she lost a total of 700 cc. of blood by vomiting, plus of course the loss during operation. She received three units of blood before operation, and nine units during the procedure. The net effect of this blood loss and replacement was that she ended up with an 18 Gm. value the day after operation—a striking rise which suggests to me that she probably was over-transfused.

I understand that there isn't much recorded on the patient's chart regarding her postoperative fluid intake and output. Is that right?

Miss Nell: That is correct.

Mr. Wetrich: On the second postoperative day, her temperature subsided, but she began to develop cyanosis and dyspnea. They progressively worsened, so that on the third postoperative day she exhibited all the manifestations of severe congestive heart failure: dyspnea, cyanosis, pitting edema, tachycardia, coarse rales, frothy sputum and bilateral pleural effusion on x-ray. Almost a liter of blood was removed by phlebotomy, and digitalis and mercurials were started. But on the fourth postoperative day, although the cyanosis had subsided, she went into irreversible shock and died.

Mr. Roger Newton, Senior Medical Student: An AP film of the patient's chest was taken with a portable machine on the day before her death. The film is of very poor quality. There is an increased density over the entire right lung field. This probably represents fluid in the pleural space. It is impossible to tell whether there was any atelectasis or pneumonitis present. There was a slight shift of the trachea to the right.

Mr. Wetrich: In the postoperative period, I think it is quite definite that this woman was in congestive heart failure. The possible causes for that state would be circulatory overload from intravenous blood or fluids, or possibly the presence of cardiac disease, or a combination of both. I don't think we have any reason for thinking that she had cardiac disease at this point, but the rise in hemoglobin is definite evidence of circulatory overload. The heart-failure therapy that was instituted did seem to have alleviated the cyanosis, but the blood pressure went down-hill anyway, and one can't help wondering why irreversible shock developed in her. The likely possibilities might include congestive failure from a circulatory overload that was just too massive to respond to therapy. Even though her cyanosis decreased, it could be that the therapy just wasn't quite enough to overcome the damage already done. Another thought is that the phlebotomy may have been excessive. It totaled about 1,000 cc. At 10:00 p.m., 150 cc. was taken out, and about two hours later another 800 cc. was removed, making a rather sizable phlebotomy. No information is available as to how large the patient was, but I understand that she was somewhat obese on her last admission. At the top of the record we do have the information that she weighed 99 lbs. when she was seen here in 1954. Thus, it is hard to estimate her size at her last admission, but I doubt that she was a very large woman.

Although this was a rather sizable phlebotomy and though the patient was in congestive heart

failure, the phlebotomy in itself wouldn't have been sufficient to throw her into irreversible shock. Another thought is that she may have had a postoperative myocardial infarct resulting in a heart disease that couldn't respond to therapy. The picture of congestive failure and irreversible shock is not at all incompatible with this hypothesis, but there is no history of chest pain. I understand, however, that pain is not too uncommonly absent when postoperative infarction occurs.

Another possibility is postoperative atelectasis and pneumonitis, which in addition to circulatory overload could have tipped the scales. According to the x-ray, the patient definitely had something in her lung fields, and I would guess it to be fluid although it may have been atelectasis. On the first postoperative day she had a temperature elevation that suggests pulmonary complications, and she also had had an upper-abdominal operative procedure which predisposes to atelectasis. She had been vomiting preoperatively, and probably was semi-comatose part of the time so that aspiration quite likely could have occurred. After the first postoperative day she apparently didn't have any fever—a fact that is somewhat contraindicative of atelectasis or pneumonitis.

In summary, I should like to suggest that this woman had severe thyrotoxic liver damage and that she did develop cirrhosis. Then, she went on to develop esophageal varices, and the bleeding from those sites led to her vomiting, which in turn led to a Mallory-Weiss type of laceration and probably more bleeding from that site. Also, it seems to me that she was overtransfused and developed postoperative congestive failure. This alone may have been the cause of death, but very possibly it occurred in conjunction with a postoperative myocardial infarct, or postoperative pneumonitis or atelectasis.

Mr. Dean Nierling, Senior Medical Student: Dave did very well. I think he included everything that we found at autopsy.

The most conspicuous findings at postmortem were confined to the lungs, liver, thyroid gland and gastrointestinal tract. The recent abdominal midline surgical incision showed early evidence of healing. When the thorax was opened, the right lung and the lower lobe and lingular portion of the upper lobe of the left lung were completely collapsed. This was felt to have been the immediate cause of death. The lungs were of normal weight. The right lung did not float in water. Contained within the tracheobronchial tree was a thick, tenacious, black, mucoid material that consisted of aspirated oropharyngeal secretions. In no area was this material felt to obstruct the bronchi completely.

At the gastro-esophageal junction was a recently repaired rent in the posterior wall which may have been the consequence either of esophagoscopy or of the vomiting that Dave alluded to. Surrounding this area was a small amount of sanguinopurulent exudate. No definite varicosities were visualized grossly, but a special technic must be employed in order to see them with the naked eye. The esophagus must be tied off above and below before it is opened, or the blood will leak out and the varices will collapse. On the microscopic sections, there was definite evidence of varicosities. The small bowel was dilated and contained small amounts of bloody, bile-stained material. The colon contained black, bloody fluid in its entirety.

The liver was of normal size and weight. The right and left lobes were approximately equal in size. There was a repaired laceration, sustained at surgery, along the anterior margin of the left lobe. The cut surface of the liver was reddish-yellow, indicating fatty metamorphosis. It had a finely nodular architecture, with definite distortion of the liver lobules. There was also some scarring noted in most of the portal areas. The spleen was considerably enlarged. The pulp was rather firm and fibrotic. Sinusoids were widened and congested. These changes are secondary to portal hypertension.

The thyroid gland was quite small and firm, indicating extensive fibrosis. We felt that this was probably late irradiation change due to the I^{131} therapy.

In a slide that we made of a section of lung, one can see a large pulmonary vessel with some anthracotic pigment in the surrounding connective tissue. The lung was completely collapsed, and the alveoli did not contain any air. The slide shows some polymorphonuclear infiltration, which is consistent with mild bronchopneumonia. Also, in some of the alveoli some small hemorrhages are visible.

In a very low-power view of the esophagus, one could see the squamous epithelial lining. In the submucosa were several large, thick-walled dilated veins. The esophageal wall was somewhat edematous.

Another section of the esophageal wall, reproduced in a somewhat higher-power view, showed the area of hemorrhage previously described in the adventitia of the esophagus. Moderate polymorphonuclear leukocytic infiltrations were visible, along with some necrosis of adipose tissue.

A section of adrenal gland showed the periadrenal fat, with a number of vessels cut into tangential sections. The adrenal cortex was shown to be of normal thickness, although there was mild lipid depletion of the zona fasciculata. This slide was important because the patient had been on steroids for about two months. It showed complete recovery of the adrenal glands.

A low-powered view of liver stained by the trichrome method showed the connective tissue green and the liver cells reddish-purple. In the portal areas we could see marked proliferation of fibrous connective tissue, along with mild bile-duct proliferation and lymphocytic infiltration.

There were markedly dilated sinusoids in the periphery of the lobule, along with some necrosis of liver cells.

In another section of liver stained by the same method, we saw dense fibrous tissue connecting portal areas. A degenerating lobule showed marked fatty metamorphosis. Some of the liver lobules presented a somewhat whorled appearance. These were regenerating liver lobules and had no relation to central veins. These changes are consistent with portal cirrhosis.

In a low-power view of the thyroid gland, one could see that the parenchyma was permeated with dense fibrous tissue. A higher-power view showed acini lined by degenerating epithelial cells. They were shown to have a granular cytoplasm, and the nuclei were undergoing karyorrhexis.

Another view, showing thyroid tissue from a different area, demonstrated follicular hyperplasia of the thyroid acini. There were many dark, hyperchromic nuclei. The cells were hyperplastic in that area.

Dr. J. C. Clifton, Internal Medicine: Was the rent in the esophagus transverse or longitudinal?

Miss Nell: I think it was longitudinal.

Dr. J. A. Buckwalter, Surgery: I operated upon this patient. This was an instructive case because of difficulties in management and because of the mistakes which were made.

It was most difficult to establish the cause of the bleeding at the time of operation. Several surgeons became involved before it was decided that the difficulty was not gastric ulcer, and that the patient had cirrhosis of the liver with bleeding esophageal varices. This diagnosis had not been obvious before or at the time of operation. There was a palpable lesion in the upper part of the stomach. It was felt that this was probably a gastric ulcer and the probable source of the bleeding.

I scrubbed in at about 11:30 p.m. because the original surgeon was uncertain that this was a gastric ulcer. The opening in the stomach was enlarged, and by inspection and palpation through the gastrotomy I determined that there was no gastric ulcer. As I examined the proximal stomach and distal esophagus, my finger passed through a defect to the outside of the stomach. This was quite clearly a traumatic defect at the esophagealgastric junction made by the esophagoscope. A linear tear in the distal end of the esophagus extended across the esophageal junction into the stomach. With considerable difficulty, this defect was closed.

Having decided that the correct diagnosis was bleeding esophageal varices, we did the operation described. I believe this was the treatment of choice. Our objective was to control the bleeding. This procedure is more satisfactory than "reefing" the esophagus. The latter involves opening the esophagus, running continuous sutures down the esophagus into the stomach, thus "reefing" the varices and thereby hoping to control the bleeding. Transverse gastroplasty, the procedure done on this patient, is an easier way of achieving the same objective. This was particularly true in this patient, since we had made an abdominal rather than a chest incision. The fact that no bleeding occurred after the operation suggested that we had been successful.

During the operation, the question of overtransfusion was discussed. No practical and reliable method exists today for measuring blood loss precisely, in such cases as this. The problem is being studied in several surgical research laboratories. A little blood goes a long distance on a white sheet. In so far as possible, a record of blood lost before and during the operation was kept, and that much was replaced. The next day, on the basis of the patient's general condition, hemoglobin and hematocrit values, we knew that she had been overtransfused. I don't believe that this was an important factor in her demise.

The patient's condition was precarious at the start of the operation. She had previously been in shock, and a rapid infusion of blood had been used to bring her out of it. I don't recall the exact length of the operation. Because of the difficulties which have been described, it was more than five hours. At the end of the operation, though during the procedure her blood pressure had been unobtainable on several occasions, her color had been poor and there had been concern for her survival, she was in relatively good condition and had respectable vital signs.

The patient's death was related to a failure to recognize atelectasis early enough and to treat it aggressively enough with tracheal aspiration and/or bronchoscopy. It is most likely that the cardiac failure was precipitated by the postoperative atelectasis. Trauma to her costal margin from necessary retraction, coupled with obesity in a critically ill patient, contributed importantly to the atelectasis. In retrospect, I think that if we had diagnosed the atelectasis earlier and treated it more aggressively, we might have wound up with a live patient.

I compliment the discussant and his collaborators.

Mr. Wetrich: Would you be willing to discuss the procedure used on the stomach for the treatment of the varices? I'm not familiar with it at all, and I suppose that some of the others aren't either.

Dr. Buckwalter: By transecting the stomach, one can interrupt the large veins which pass from the portal to the systemic circulation at the esophago-gastric junction, reduce the pressure in the varices and stop the bleeding. This is only a stopgap measure, for collateral channels will be established since the portal hypertension persists. The control of the bleeding provides an opportunity for improving the patient's general condition.

A definitive procedure may then be done with reduced risk, the purpose of which is to reduce the portal pressure. End-to-side portal caval shunt is the operation most often done. Direct suture—"reefing" of the esophageal varices—or resection of the terminal esophagus and/or the proximal stomach may accomplish the same purpose, but with greater risk.

Mr. Brent Holleran, Senior Medical Student: Why wasn't a barium swallow done before the esophagoscopy? If one is highly suspicious of varices, shouldn't he get x-rays first, with a barium swallow?

Dr. Buckwalter: I first saw this patient in the operating room, and so cannot fill in all of the details. Usually, a barium swallow is done prior to esophagoscopy, but there were extenuating circumstances in this case. Perhaps because of the massive bleeding the patient's physician had decided x-ray examination would be valueless. Radiologists differ on this question. Some surgeons and endoscopists would have gastroscoped this patient.

Mr. Arnold Wolfe, Junior Medical Student: The protocol says that the patient was vomiting bright red blood. How compatible is this with esophageal varices?

Dr. Buckwalter: Patients with bleeding varices frequently vomit bright red blood, depending upon how much bleeding there is.

Mr. George Naifeh, Jr., Junior Medical Student: Why was the colon deflated during the operation?

Dr. Buckwalter: I don't remember particularly why her colon should have presented a problem. It must have been dilated and in the way.

Dr. K. A. Feisel, Research Fellow in Internal Medicine: Was the portal pressure measured at operation?

Dr. Buckwalter: No, we were preoccupied with life-threatening bleeding in a critically ill patient. The operation was long, and she had been in shock off and on. Large omental vessels reflected the increased portal tension. Another reliable indication was the venous bleeding incident to the peritoneal manipulations. These observations, in the presence of a liver presenting the gross appearance of cirrhosis and in the absence of any other explanation for her bleeding, made the diagnosis.

Mr. George Pauk, Junior Medical Student: She had a history of rheumatoid arthritis and a bout of granulocytopenia. I also noticed that she had an enlarged spleen. What do you think of the possibility of Felty's syndrome?

Dr. William B. Bean, Chief, Internal Medicine: Felty's syndrome is a combination of rheumatoid arthritis, splenomegaly and leukopenia which occurs often enough to make one suppose it to be a discrete entity. What its significance may be, I have no idea. We had such a patient on the wards the other day, and I discussed the case with the junior students. They had looked up Felty's original article in a 1925 issue of the JOHNS HOPKINS HOSPITAL BULLETIN, in which he reported and described several cases.

Dr. Clifton: Dr. Bean, would you say something about the possible relationship of the patient's thyrotoxicosis to her liver disease?

Dr. Bean: I don't think I've ever encountered a patient with cirrhosis of the liver in whom I thought thyrotoxicosis had been the major or exclusive cause for it. On the other hand, in thyrotoxicosis, one may see various signs and symptoms of liver disease. During a period of acute toxicity, one may find various impairments of liver function. The majority of patients may have undernutrition and depletion of glucose from glycogen stores. The thyroid hormone doesn't seem to have any specific effect on the liver. There is no reason why this patient might not have had sub-clinical, non-jaundiced hepatitis at this time. It might have been a post-necrotic kind of cirrhosis. It seemed to be a diffuse, rather than a sharply localized, thing in the sections that the pathologists photographed. It would be unusual for thyrotoxicosis alone to damage the liver to this extent, though I don't know that it is impossible.

Mr. Nierling: There are several references that mention the relationship between thyrotoxicosis and liver disease. There are a number of series of cases that have been studied, and several investigators have found an incidence of 25-30 per cent of definite cirrhosis in people with longstanding thyrotoxicosis—i.e., of two years or more. I don't know how long this patient had had her thyrotoxicosis.

There are a couple of theories regarding the causation. One is that there is a toxic substance circulating in the blood. Another is that there is a change in the hemodynamics between the hepatic artery and the portal vein, with changes in the pressure relationships resulting in increased capillary pressures and scarring. Most of these changes that have been described occur in the subcapsular region of the liver, rather than centrally, which was not particularly true in this case.

Dr. R. E. Hodges, Internal Medicine: We have tabulated the records of over 1,000 patients, and though I can't give you the exact incidence of cirrhosis in thyrotoxicosis patients, it is remarkably small. It must be less than it would be for the average patient seen in this hospital.

Dr. Bean: Mr. Nierling's figures are drawn pretty largely from times and places in which effective therapy for thyrotoxicosis was not available. Those ill with chronic thyrotoxicosis probably encounter severe malnutrition. In my clinical experience I don't remember seeing a patient with cirrhosis of the liver in whom I thought thyrotoxicosis had been a major or the only etiologic agent.

Dr. Ian M. Smith, Internal Medicine: Dr. Clifton,

how frequently does one find a normal BSP with cirrhosis and esophageal varices?

Dr. Clifton: It is very unusual, but it does occur. We have a woman on the ward now with a similar situation.

Dr. Henry E. Hamilton, Internal Medicine: Is there anything which might make you think that this patient's gland was predisposed to cancer formation?

Mr. Nierling: I saw none, but there were some definite hyperplastic changes. Whether these are considered precancerous or not, I'm not prepared to say.

Dr. Bean: Have the people from the Department of Pathology had a large experience with removing thyroids at autopsy from subjects whose thyroids have been put out of business clinically with radioactive iodine? Have we had enough of those to say much about it?

Dr. Emory D. Warner, Pathology: No, we haven't had many. Such patients all live, I guess.

Miss Nell: Along the same line, I have a question I should like to ask Dr. Evans. When I added up the millicuries of iodine, I believe the total was somewhere in the vicinity of 34. Is this more than usually is needed for the treatment of thyrotoxicosis?

Dr. Titus Evans, Radiobiology: Yes, very definitely more. In this case we were asked to do a thorough job of making the patient hypometabolic. I might say that the last time she appeared at conference she was declared euthyroid but was requested to return in three months. She didn't do so, and thus she wasn't a very cooperative patient. We don't know whether she needed thyroid extract after that or not, but we did make her somewhat hypometabolic.

NECROPSY DIAGNOSES

1. Pulmonary collapse, massive, with patchy bronchopneumonia
2. Portal cirrhosis with esophageal varices and splenomegaly
3. Status postoperative repair of esophageal laceration and gastric transection with re-anastomosis
4. Chronic irradiation reaction, post-radioiodine therapy, thyroid gland.

TABLE 1

LIVER FUNCTION DURING HYPERTHYROIDISM

	12-9-54	*12-22*	*12-27*	*1-17-55*	*1-21*	*2-2*	*2-8*	*3-26*	*4-24*	*8-2*	*10-4-55*
Thymol turbid.	9.4	9.0	9.1		11.0	4.7	4.1	5.1		4.8	
Zinc floc.	35.5	24.5	20.6		23.0	21.0	20.0	23.5			
Ceph. floc.											
24	1	3	4	0		1	2	4		1	
48	2	3	4	1		2	3	4		2	
Cholest. mg. %	129.0	234.0	236.0	203.0				137.0			
ester								73.0			
Plasma Protein											
T	7.5	7.4	7.3	6.7			6.8	6.5	6.0		8.1
A	2.8	5.1	3.7	3.1			3.5	3.1	3.3		4.0
G	4.7	2.3	3.6	3.6			3.3	3.4	2.7		4.1
BSP reten. %					0%					3%	
Alk. Phos.								7.6		12.2	
Van den Burgh											
1 min.								0.1			
30 min.								0.2			
Liver below RCM in cm.	6-7			8-9				6-7		NP°	NP°

° NP—Not palpable

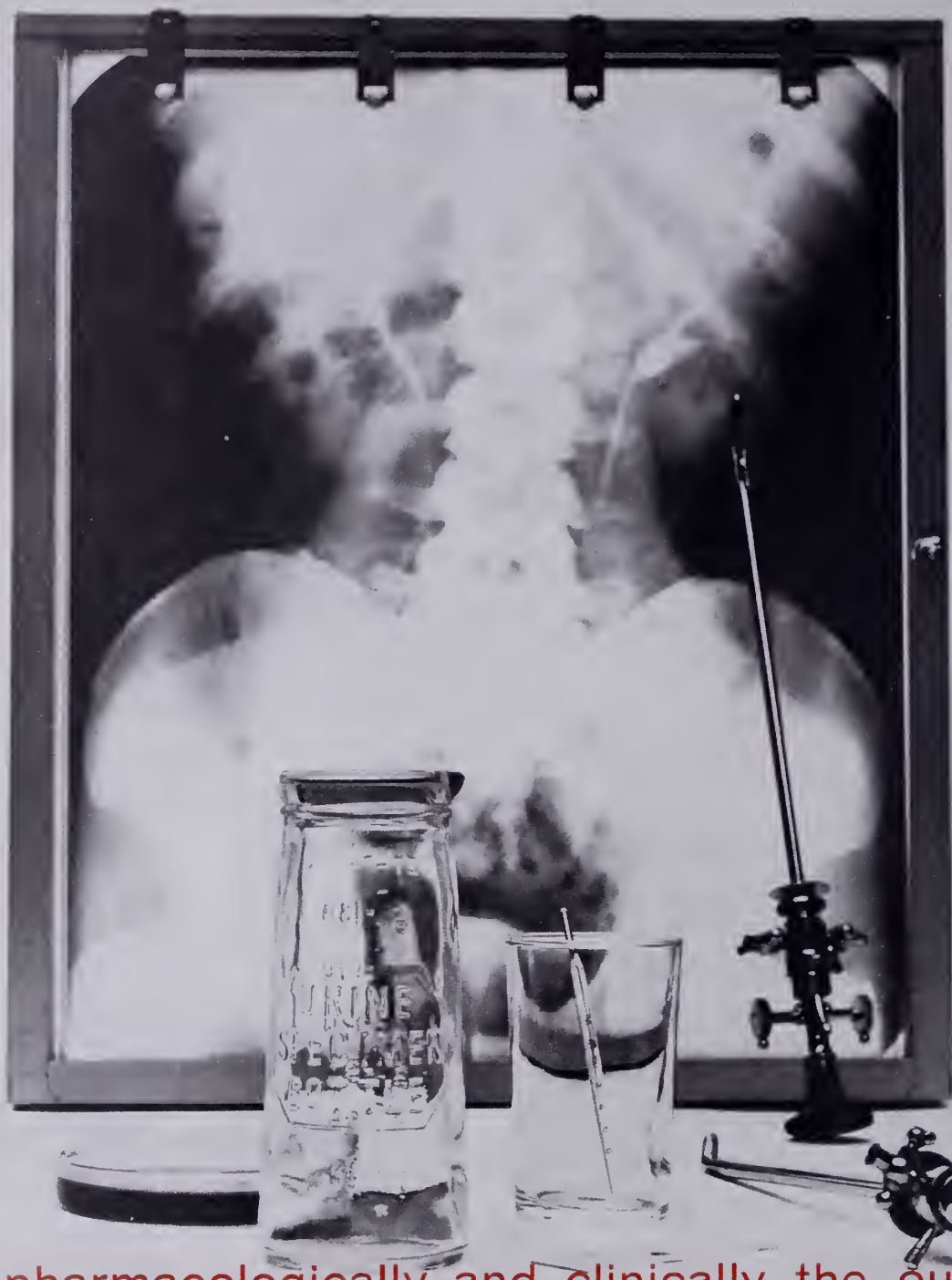
Coming Meetings

In State

March 29-30	**St. Paul Area, VA Surgical Conference.** VA Hospital, Des Moines
April 1	**Pediatric Conference (The Raymond Blank Memorial Hospital Association).** Younker Building, Iowa Methodist Hospital, Des Moines
April 6-8	**Iowa Tuberculosis and Health Association Annual Meeting.** Hotel Savery, Des Moines
April 24-27	**Annual Meeting, Iowa State Medical Society.** Veterans Memorial Auditorium, Des Moines

Out of State

March 1-2	**Southwestern Pediatric Society Spring Lecture Series.** Statler Hotel, Los Angeles
March 1-4	**Annual Clinical Conference, Chicago Medical Society.** Palmer House, Chicago
Mar. 2	**Ketosis Symposium.** Presbyterian-St. Luke's Hospital, Chicago
March 2-7	**Amercian Urological Association, S. E. Section.** Jacksonville, Florida
March 3-5	**American Academy of Forensic Sciences.** Drake Hotel, Chicago
March 3-5	**Association of Clinical Scientists.** DeWitt Clinton Hotel, Albany
March 3-April 21	**Clinical Physiology: Applications of Basic Physiology to Diagnostic and Therapeutic Problems (The New York University Post-Graduate Medical School).** New York University
March 6-13	**American Otorhinologic Society for Plastic Surgery, Inc.** Deauville Hotel, Miami Beach
March 7-9	**Pediatrics.** University of Kansas School of Medicine, Kansas City
March 7-10	**New Orleans Graduate Medical Assembly.** The Roosevelt Hotel, New Orleans
March 7-11	**Course for Physicians in General Practice.** University of California, Mount Zion Hospital, San Francisco
March 7-11	**Traumatology.** UCLA, Los Angeles
March 7-12	**Motor Anomalies of the Eye (The New York University Post-Graduate Medical School).** Part I—New York University, New York City
March 7-18	**Medical and Public Health Control of Ionizing Radiation.** NYU-Bellevue Medical Center, New York City
March 8	**National Multiple Sclerosis Society.** New York City
March 10-12	**Advances in Ophthalmic, Surgical and General Pathology.** University of California, San Francisco
March 11	**Symposium on Hypertension.** University of Southern California, Los Angeles
March 11-12	**Ophthalmic Plastic Surgery.** University of California, Los Angeles
March 11-13	**Annual Meeting of the American Society of Psychosomatic Dentistry and Medicine.** Shoreham Hotel, Washington, D. C.
March 13-14	**American Otological Society.** Deauville Hotel, Miami Beach
March 13-16	**Missouri State Medical Association.** Sheraton-Jefferson Hotel, St. Louis
March 13-18	**National Health Council, National Health Forum.** Miami
March 14-16	**Internal Medicine for Internists.** Center for Continuation Study, University of Minnesota
March 14-18	**Motor Anomalies of the Eye (The New York University Post-Graduate Medical School).** Part II—New York University, New York City
March 14-18	**Thirteenth Annual Postgraduate Course on Diseases of the Chest (Council on Postgraduate Medical Education of the American College of Chest Physicians).** Sheraton Hotel, Philadelphia
March 14-18	**Arthritis and Related Disorders—For the Experienced Clinician and Research Worker.** Bellevue Medical Center, New York City
March 14-19	**Electrocardiography.** The New York University Post-Graduate Medical School, New York City
March 15-16	**American Broncho-Esophagological Association.** Deauville Hotel, Miami Beach
March 15-17	**American Laryngological, Rhinological and Otological Society, Inc.** Deauville Hotel, Miami Beach
March 16-20	**Diagnostic Radiology.** University of California, San Francisco
March 17-19	**American Radium Society.** Caribe Hilton Hotel, San Juan, Puerto Rico
March 17-19	**International Symposium on "The Blood Platelets."** Henry Ford Hospital, Detroit
March 18-19	**American Laryngological Association.** Deauville Hotel, Miami Beach
March 18-19	**Pioneers Memorial Hospital Medical Staff Tenth Annual Postgraduate Assembly.** Pioneers Memorial Hospital, Brawley, Oklahoma
March 18-24	**American Academy of General Practice.** Philadelphia
March 19	**Trauma for General Physicians.** Center for Continuation Study, University of Minnesota
March 19-20	**Geriatrics in Clinical Practice.** University of California, Los Angeles
March 21	**Pulmonary Disease.** University of Kansas School of Medicine, Kansas City
March 21-23	**American College of Surgeons, Sectional Meeting.** The Broadmoor, Colorado Springs
March 21-23	**Refresher Course in Allergic Conditions.** NYU-Bellevue Medical Center, New York City
March 21-23	**Fifth Annual Course in Anesthesiology for Physicians.** Anesthesia Section, Los Angeles County Medical Association, Los Angeles
March 21-24	**Southeastern Surgical Congress.** Roosevelt Hotel, New Orleans
March 21-24	**The American Academy of General Practice.** Philadelphia's Convention Hall, Philadelphia
March 22	**Gastroenterology.** University of Kansas School of Medicine, Kansas City
March 23	**Psychiatry.** University of Kansas School of Medicine, Kansas City
March 24	**Dermatology Clinic One-Day Symposium.** University of Southern California, Los Angeles
March 24	**Neurology and Neurosurgery.** University of Kansas School of Medicine, Kansas City
March 24-26	**Adrenal Steroids.** University of Oklahoma Medical Center, Oklahoma City
March 24-26	**American Association for the History of Medicine, Inc.** Charleston
March 25	**Endocrinology and Metabolism.** University of Kansas School of Medicine, Kansas City
March 25-26	**St. Joseph Hospital, Burbank, Annual Medical Assembly.** St. Joseph Hospital Auditorium, Burbank
March 26	**American Psychosomatic Society.** Sheraton-Mount Royal Hotel, Montreal, Canada
March 26-27	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Frances Marion Hotel, Charleston
March 26-27	**Southwestern Society for Nuclear Medicine.** Menter Hotel, San Antonio



when sulfa is your plan of therapy...

pharmacologically and clinically the outstanding

Rapid peak attainment — for early control — KYNEX® Sulfamethoxypyridazine reaches peak plasma levels in 1 to 2 hours[1,2] . . . or approximately one-half the time of other once-a-day sulfas.[2] Uninterrupted control is then sustained over 24 hours with the single daily dose . . . through slow excretion without renal alteration.

High free levels — for dependable control — More efficient absorption delivers a higher percentage of sulfamethoxypyridazine — averaging 20 per cent greater at respective peaks than glucuronide-conversion sulfas.[2] Of the total circulating levels, 95 per cent remains in the fully active, unconjugated form even after 24 hours.[3]

Extremely low toxicity[4] . . . only 2.7 per cent incidence in recommended dosage — Typical of KYNEX relative safety, toxicity studies[5] in 223 patients showed TOTAL side effects (both subjective and objective) in only six cases, all temporary and rapidly reversed. Another evaluation[4] in 110 patients confirmed the near-absence of reactions when given at the recommended dosage. High solubility of both free and conjugated product[6] obviates renal complications. No crystalluria has been reported.

Successful against these organisms: streptococci, staphylococci, E. coli, A. aerogenes, paracolon bacillus, Gram-negative rods, pneumococci, diphtheroids, Gram-positive cocci and others.

1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378, (Nov.) 1956. 2. Boger, W. P.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & Clin. Ther. 5:604 (Oct.) 1958. 4. Vinnicombe, J.: Ibid. 5:474 (July) 1958. 5. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1051 (Sept.) 1959. 6. Roepke, R. R.; Maren, T. H., and Mayer, E.: Ann. New York Acad. Sc. 60:457 (Oct.) 1957.



once-a-day sulfa...

NOTE: Investigators note a tendency of some patients to misinterpret dosage instructions and take KYNEX on the familiar q.i.d. schedule. Since one KYNEX tablet is equivalent to eight to twelve tablets of other sulfas, even moderate overdosage may produce side effects. Thus, the single dose schedule must be stressed to the patient.

KYNEX Tablets, 0.5 Gm., bottles of 24 and 100. Dosage: Adults, 0.5 Gm. (1 tablet) daily, following an initial first day dose of 1 Gm. (2 tablets).

KYNEX Acetyl Pediatric Suspension, cherry-flavored, 250 mg. sulfamethoxypyridazine activity per teaspoonful (5 cc.). Bottles of 4 and 16 fl. oz. Recommended Dosage: Children under 80 lbs.: 1 teaspoonful (250 mg.) for each 20 lb. body weight, the first day, and ½ teaspoonful per 20 lb. per day thereafter. For children 80 lbs. and over: 4 teaspoonfuls (1.0 Gm.) initially and 2 teaspoonfuls daily thereafter. Give immediately after a meal.

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NEW—for acute G.U. infection AZO-KYNEX® Phenylazodiaminopyridine HCl—Sulfamethoxypyridazine Tablets, contains 125 mg. KYNEX in the shell with 150 mg. phenylazodiaminopyridine HCl in the core. Dosage: 2 tablets q.i.d. the first day; 1 tablet q.i.d. thereafter.

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Lederle

March 27-31	**American Society of Maxillofacial Surgeons.** Ambassador Hotel, Los Angeles
March 28-29	**Intermountain Pediatric Society.** Stardust Hotel, Las Vegas
March 28-30	**American College of Surgeons, Sectional Meeting.** Sheraton-Portland Hotel, Portland, Oregon
March 28-31	**Southwestern Surgical Congress.** Riviera Hotel. Las Vegas
March 28-April 1	**Endocrinology for General Physicians.** Center for Continuation Study, University of Minnesota
March 28-April 2	**Surgery of the Eye (The New York University Post-Graduate School).** New York University
March 29-30	**Decennial U.S.P. Convention.** Statler Hilton Hotel, Washington, D. C.
March 30	**American Gastroscopic Society.** Roosevelt Hotel, New Orleans
March 30-April 2	**Neurosurgical Society of America.** Del Monte Lodge, Del Monte, California
March 30-April 3	**Physiological Basis for Diagnosis and Treatment (American Physiology Society).** University of California, San Francisco
March 31-April 2	**American Gastroenterological Association.** Roosevelt Hotel, New Orleans
April 1	**Spokane Society of Internal Medicine.** Spokane
April 1-2	**American College of Surgeons, West Virginia Chapter.** The Greenbrier, White Sulphur Springs
April 1-2	**American Gastroenterological Association.** Roosevelt Hotel, New Orleans
April 1-3	**American Society of Internal Medicine.** Palace Hotel, San Francisco
April 1-3	**American Society for the Study of Sterility.** Sheraton-Gibson Hotel, Cincinnati
April 1-14	**Bahamas Medical Conference.** British Colonial Hotel, Nassau, Bahamas
April 3-6	**American College of Obstetricians and Gynecologists.** Netherland Hilton Hotel, Cincinnati
April 3-6	**American Surgical Association.** The Greenbrier, White Sulphur Springs
April 4-6	**Clinical Reviews (Mayo Clinic and Mayo Foundation).** Rochester, Minn.
April 4-6	**Ophthalmology.** University of Kansas School of Medicine, Kansas City
April 4-7	**International Anesthesia Research Society.** Washington, D. C.
April 4-9	**Annual Meeting American College of Physicians.** Mark Hopkins and Fairmont Hotels, San Francisco
April 4-9	**Thirty-Third Annual Spring Congress in Ophthalmology and Laryngology.** The Gill Memorial Eye, Ear and Throat Hospital, Roanoke
April 5	**Fundoscopy in Internal Medicine.** University of Southern California, Los Angeles
April 6	**American Society of Facial Plastic Surgery.** Hotel Elysee, New York City
April 6-8	**Otolaryngology.** University of Kansas School of Medicine, Kansas City
April 7-8	**Respiro-Cardiac Resuscitation (The American College of Cardiology).** New York City
April 7-9	**American Association of Railway Surgeons.** Drake Hotel, Chicago
April 7-9	**Emergency Surgery for Surgeons.** Center for Continuation Study, University of Minnesota, Minneapolis
April 7-10	**American Association for Cancer Research, Inc.** Chicago
April 8-9	**Mid-Central States Orthopaedic Society.** Wichita
April 8-9	**North Pacific Society of Neurology and Psychiatry.** Benjamin Franklin Hotel, Seattle
April 8-10	**Emotional Problems in Pediatric Practice.** University of California, Los Angeles
April 8-12	**American Dermatological Association, Inc.** Boca Raton Hotel, Boca Raton, Florida
April 8-12	**Florida Medical Association.** Robert Meyer Hotel, Jacksonville
April 9-10	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Pick-Nicollet Hotel, Minneapolis
April 9-12	**Texas Medical Association.** Hotel Texas, Fort Worth
April 10-11	**American Society for Artificial Internal Organs.** Pick-Congress Hotel, Chicago
April 10-13	**Tennessee State Medical Association.** The Maxwell House, Nashville
April 11-13	**American College of Surgeons, Sectional Meeting.** Hotel Leamington, Minneapolis
April 11-13	**Anesthesiology.** University of Kansas School of Medicine, Kansas City, Kans.
April 11-13	**Radiology for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
April 11-15	**American Association of Immunologists.** Chicago
April 11-15	**American Physiological Society.** Chicago
April 11-15	**Federation of American Societies for Experimental Biology.** Chicago
April 11-16	**American Association of Anatomists.** Statler-Hilton Hotel, New York City
April 11-16	**American Society of Biological Chemists, Inc.** Chicago
April 13-15	**American Public Health Association, Southern Branch.** Memphis
April 13-17	**Harvey Cushing Society.** Fairmont Hotel, San Francisco
April 14	**American College of Surgeons, Sectional Meeting.** Kahler Hotel, Rochester, Minn.
April 14	**Ward Walks in Rare Diseases.** University of Southern California, Los Angeles
April 17-20	**Arkansas Medical Society.** Pine Bluff
April 18-19	**American Association for the Advancement of Science, Section on Medical Sciences.** Vanderbilt University, Nashville
April 18-19	**Society of Head and Neck Surgeons.** Sheraton Hotel, Philadelphia
April 18-19	**Society of Neurological Surgeons.** Olympic Hotel, Seattle
April 18-20	**Gallbladder Surgery.** Cook County Graduate School of Medicine, Chicago
April 18-20	**Surgery of the Hand.** Cook County Graduate School of Medicine, Chicago
April 18-29	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
April 18-May 13	**Radiation Hygiene Measurements.** NYU-Bellevue Medical Center Postgraduate Medical School, New York City
April 18-May 16	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
April 20-June 1	**Surgical Anatomy: Head and Neck.** College of Medical Evangelists, Los Angeles
April 20-22	**Medical and Chirurgical Faculty of the State of Maryland.** The Alcazar, Baltimore
April 20-23	**American Academy of Pediatrics.** Atlantic City
April 20-24	**Sixth International Congress, Association of National European and Mediterranean Societies of Gastro-Enterology.** Leiden, Netherlands

(Continued on page 169)



MAIL-ORDER PRESCRIPTION SERVICES ARE A SERIOUS THREAT

The filling of prescriptions in response to mail orders, an arrangement that is about to mushroom, is a serious threat to public health and safety. The operators include the American Association of Retired Persons and the National Retired Teachers Association Drug Buying Service, serving only those who claim to be over 55 years of age, the Getz Prescription Co., of Kansas City, which recently launched a nationwide newspaper advertising campaign offering prescription drugs on a mail-order basis to the general public, and the Organization Drug Service, Inc., of Washington, D. C., which has been established to fill mail-order prescriptions for the 80,000 or more members of the Bakery and Confectionery Workers Union.

Addressing a special conference of state pharmaceutical association secretaries and secretaries of state boards of pharmacy, in Washington on January 6, Dr. George F. Archambault, pharmacy advisor to the surgeon general of U.S.P.H.S., noted that public health hazards of mail-order operations include the delays encountered in obtaining prescriptions by mail, the encouragement of self-medication practices during the time that prescriptions are en route, the opportunities for deviators to obtain drugs for illicit traffic, the possibility of using non-professional personnel in filling prescriptions by mail-order pharmacies, the inaccessibility of prescription files when drugs have been ingested by persons other than those for whom they were intended, and the destruction of the physician-patient-pharmacist relationship, making it impossible for the pharmacist to check with the doctor about the identity and strength of the drug prescribed, or about the refill authorization. Mr. Raymond Dauphinais, director-designate of the American Pharmaceutical Association's Legal Division, questioned the authenticity of any prescription created by a practitioner not licensed to practice medicine in the state where the prescription is sent.

The conferees' recommendations for eliminating mail-order prescription schemes ranged from strengthening state and federal laws to the incorporating of a specific statement in the APhA Code of Ethics making it unethical for pharmacists to participate in such schemes. A detailed report of the conference has been published in the February issue of the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, PRACTICAL PHARMACY EDITION.

THE BIG PROBLEM THAT WASN'T THERE

The financing of health care for Old Age and Survivors Insurance benefit recipients is by no means so important a problem as the proponents of the Forand Bill would like our fellow citizens to believe, and moreover, it is almost entirely temporary.

Last June, the SOCIAL SECURITY BULLETIN contained a statment that has since been repeated all too frequently: "Three-fifths of all persons aged 65 and over had less than $1,000 money income in 1958." That is only one of numerous assertions that uncritical people are accepting as evidence that the majority of such persons are quite unable to purchase medical and hospital care for their illnesses.

These declarations deserve careful scrutiny. In the first place, elderly women who are the wives of and are financially dependent upon elderly men, for the purposes of the report in the SOCIAL SECURITY BULLETIN, were counted as having no resources at all unless they had incomes separate from those of their husbands. Nearly 4,000,000 of the 9,000,000 such women were thus misrepresented as altogether destitute.

Second, many single women in the upper age brackets work for their keep plus small salaries, and thus for a typical one of them an income of, let us say, $750 per year represents potential savings, since their everyday necessities are provided them in kind.

Third, the HEW's figures were gathered by interviewers, and the incomes of the elderly must have been understated in many instances. Almost no one is willing to admit all of his assets or make a true report of his income when he is asked about them, and people who foresee the possibility of needing, someday, to apply for public assistance have a motive for representing their situations as particularly bleak.

OASI RECIPIENTS AREN'T IN DESPERATE STRAITS

No one, as yet, has collected reliable statistics on the resources of the elderly, or indeed has determined how much money such a person needs if he or she is to live comfortably. There is, of course, the additional problem—thus far unsolved—of what the word *comfortably* should mean when used in this context. But it must be remembered that the people whom we are discussing—those for whom the Forand Bill would provide—are not the chronic poor and the improvident. Rather, they are retired wage or salary earners and their wives or widows.

Most of us younger people are accustomed to

thinking that a family unit, to be self-sustaining, must have an income of at least $4,000 per year. But elderly couples don't need that much. Out of a $4,000 income, a young married man with two children pays $1,000, more or less, as rent or as payments on a home; $345 federal income tax, at least nominal state income and unemployment insurance taxes, and $100 social security tax; and the costs of his children's food, clothing and incidental needs. All of these are expenses that the average OASI-recipient couple don't have. Currently, 70 per cent of OASI-beneficiary couples own their own homes, three-quarters of them mortgage-free. Each of them is entitled to double the standard personal exemption, and thus they pay no federal income tax unless their combined incomes exceed $2,400 per year. Thus, it appears that they should be able to live on a minimum of about $2,000—or $1,000 each. Mrs. Rita R. Campbell, consulting economist with the American Enterprise Association, Inc., has quoted a 1957 study as showing that the *average* elderly urban family spends $2,405 per year for consumer goods and services, as against $4,430 for the average younger urban family.

OASI data yield the following annual median incomes of beneficiaries for the fall of 1957: $2,190 for couples; $1,145 for single retired workers; and $880 for aged widows. From those figures it would appear that the "very low income" label should be applied only to the aged widows in the OASI beneficiary group, and since it is probable that many of them receive Old Age Assistance checks in addition to OASI benefits, by no means all of them would qualify for that designation.

VOLUNTARY PREPAYMENT PLANS ARE BEING BROADENED TO COVER ALL OF THEM

Now, let us consider the ability of the present OASI-beneficiary couples and future such people to pay for their own medical care and hospitalization expenses. As regards the numbers of OASI benefit recipients now covered by private health insurance plans, precise data are again unavailable, but there is reason to believe that 30 or 35 per cent of the least affluent of them—couples with cash incomes of less than $2,000 per year—now have policies. Some of these people's premiums are paid for them by their children (and thus far no one has voiced any strong criticism of that practice), but others can and do pay the costs for themselves. A New York State updating (1956) of minimum budgets originally formulated by the U. S. Bureau of Labor Statistics included allowances for private health insurance premiums in plans for New York City elderly couples with incomes of only $2,050 and for Buffalo couples having no more than $1,950 per year.

In the near future, of course, the circumstances of retired people are certain to improve rapidly. Private pension plans, individually purchased endowment policies and annuities, and other individual savings and/or investment programs facilitated by the high wage scales now being paid will supplement OASI benefits ever more liberally as time goes on.

Moreover, almost all group health insurance plans now permit retired workers to retain their coverages at no advance in premiums, and experiments are being conducted with policies that accumulate premium reserves during the policyholder's working years and become "paid-up" on the date that he retires.

In the light of these facts, the need for such legislation as the Forand Bill has not been, and indeed cannot be, proved.

POTTAWATTAMIE SOCIETY LEADS THE WAY

The AMA, currently, is urging county medical societies and Auxiliaries to arouse opposition to the Forand Bill among the other organizations in their communities, and to provoke a storm of letters to senators and representatives about it. For the doctors and doctor's wives who can't quite see how they can accomplish those purposes in their localities, the dinner that was held by the Pottawattamie County Medical Society, in Council Bluffs on February 16, should provide both some encouragement and some practical technics.

Drs. Gerald V. Caughlan, Charles V. Edwards, Henning W. Mathiasen and Fred H. Beaumont led in the planning, and carried out the project within a single week. No listing of organizations was available, to say nothing of lists of the officers' names, but four girls were hired to conduct a telephone investigation and proffer invitations. To club officials who had accepted over the telephone, reminder cards were immediately mailed.

The 131 people who attended the dinner represented 56 different clubs, associations and civic groups in Pottawattamie County—groups of all sorts, including some labor unions.

Dr. Beaumont opened the meeting by reviewing the background of the Forand proposal, and called attention to the two cards which had been placed beside each guest's plate—one asking for the name, address and organizational affiliation of the guest, and the other providing the names and addresses of the chairman of the House Ways and Means Committee, of the two Iowa senators, and of the representative from the congressional district in which Council Bluffs is located. He urged the guests to write letters to those men, and though he said he hoped they would support the County Medical Society's stand when they had heard the speakers who were to follow him, he made it plain that the Society wanted them to express their opinions to the lawmakers, regardless of what those opinions might be.

The guest speakers included two men from Mutual of Omaha, Mr. Don Lidolph, director of public relations, and Mr. Russell Bakke, underwriting executive, and Mr. Fred Keuthe, financial

secretary of United Benefit of Omaha. They made highly competent presentations of the principal arguments against the Forand Bill in particular and against creeping socialism in general.

Only about a half dozen people responded to a subsequent request for questions from the floor, and the questioners were about evenly divided between the pros and the cons.

In closing the program, Dr. Beaumont asked for a show of hands from those who felt they wanted to write the requested letters, and a substantial number responded. He then declared, "That's good, for next Monday you'll get a telephone call asking whether you have written them."

The occasion was heartening for all of the doctors who planned it and participated in it. This was the sort of thing that doctors everywhere must do if they are to arouse concern among their fellow citizens about the most crucial domestic issue facing the federal government today.

The Pottawattamie County Medical Society deserves the compliments of the entire medical profession.

OSTEOCHONDROSIS OF THE HIP

It is now 50 years since aseptic necrosis in the capital epiphysis of the femoral head in children was first described, a condition which became known, variously, as Legg-Calvé-Perthes disease, osteochondritis deformans coxae juvenilis, or coxa plana. Though a definite etiology for this condition has never been established, and though there has been no unanimity about the best method for treating it, it is generally agreed that the affected femoral head should bear no weight until revascularization occurs and regeneration of the femoral head is apparent.

Disagreement persists as to the best method for the prevention of weight-bearing. Carpenter and Powell recently advocated bed rest with Buck's extension as the most effective.*

It is very difficult for the parents of children so afflicted to cooperate in a regimen of absolute bed rest. However, if the diagnosis is made early in the disease process, mainly on the basis of pain in the hip, night cries, limp, restricted hip rotation, atrophy of the thigh and/or shortening of the leg, there is less opportunity for an unsatisfactory result. It must be remembered that this condition may be bilateral.

It is well to insist upon x-ray examination for those children who have been brought to the physician because of a limp and pain in the hip. What might at first sight be considered as a "sprain" or "synovitis" of the hip may well prove to be osteochondrosis after proper diagnostic methods have been employed.

* Carpenter, E. B., and Powell, D. O.: Osteochondrosis of capital epiphysis of femur (Legg-Calvé-Perthes disease); long-term end-results in 90 patients. J.A.M.A., **172**:525-531, (Feb. 6) 1960.

POLITICAL QUACKERY

At a hearing of the House Interstate and Foreign Commerce Committee, solemn lawmakers . . . debated what historians one day, in a footnote perhaps, will describe as the great lipstick crisis. According to Rep. Leonor K. Sullivan (D., Mo.), the health of the women of America is threatened by synthetic coloring agents which are used to produce such desirable shades as boldface purple and striking pink. In an effort to rebut her testimony, harassed spokesmen of the industry sought refuge in the facts, notably that in order to suffer ill effects, a person would have to swallow one hundred lipsticks per day. . . .

However bizarre it might have seemed elsewhere on Capitol Hill . . . the hearings on color additives have brought out in full force, from legislative and executive branches alike, officials who fairly might be described as health zealots. In their misguided view, the government must go far beyond its time-honored role of establishing reasonable, scientific standards for determining the safety of substances used in food and drugs. . . . The proposed means . . . are unmistakably suspect, for they would open the door to all kinds of bureaucratic abuse. . . . Perhaps worst of all, in a realm once distinguished for careful, objective inquiry, such a change of policy would substitute prejudice and superstition for scientific truth.

Such risks are not mere theory; since 1958, when Congress passed various amendments to the Federal Food, Drug and Cosmetic Act, they have been all too real. In official language, the legislation was designed "to protect the health of consumers by requiring manufacturers of food additives and food processors to pretest any potentially unsafe substances which are to be added to food; and to advance food technology by permitting the use of food additives at safe levels." . . . At the last minute, however, an unwelcome rider, the Delaney Amendment, was affixed to the bill. As interpreted by the FDA and its politically conscious superiors in the Department of Health, Education and Welfare, this proviso has been used to ban outright, and wholly without regard to the rule of reason, any food additive "found to induce cancer when ingested by man or animal." Sentiment in favor of a similar prohibition for color additives has been mounting fast.

In emotional and political terms, the Delaney Amendment has a powerful appeal. By any other yardstick, however, it is a foolish and mischievous piece of legislation. To begin with, it has bestowed sweeping powers upon an agency which, the evidence suggests, is not immune to arbitrary action. Thus the Food and Drug Administration recently discovered that a synthetic hormone known as stilbestrol, which is used . . . to spur the growth of chickens, caused cancer when fed to rats in excessive amounts. FDA promptly cracked down on the poultry raisers, halting their output at the

taxpayer's expense. However, it continued to allow the same substance to be used to fatten cattle and sheep, as well as in doctors' prescriptions. The degree of concern over public safety, it appears, tends to vary with political pressures.

In carrying out its mandate, moreover, FDA scarcely has proven a model of scientific objectivity. The agency has shown an unbecoming penchant for publicity. . . . Moreover, in screening substances for their carcinogenic qualities, its researches have leaned heavily on experimentation with mice, a technique which, in the view of some independent experts (notably one at the Sloan-Kettering Institute) is open to serious challenge. It also has bowed to groundless prejudice, so popular among lawmakers, that artificial substances are apt to be more deleterious to health than natural ones (in fact, sunshine and eggs, to name two, have been found to be cancer-inducing). . . . In the process, the rights of thousands of people have been trampled. What is at stake, however, involves far more than poultry farms or cranberry bogs. For in the hands of ambitious politicos, federal food and drug laws have become a palpable threat to the advance of food technology, without which this nation never could have moved from the farm to the city, and upon which, if anything, its dependence is likely to grow. . . . The U. S. needs—and over the years has enjoyed—protection against genuine enemies of its health and welfare. Now, to paraphrase an old French saying, it needs to be protected against its so-called friends.

—Condensed version of an editorial in BARRON'S, February 1, 1960.

NEW PENICILLINS

Bristol Laboratories, Inc. has recently marketed a new "synthetic" penicillin which is, the firm claims, superior to other oral penicillin products. Initial experiences with it were reported at the Antibiotic Symposium held in Washington, D. C., in November, 1959, and these suggest that the new preparation has many attributes which make it an acceptable therapeutic material.

"Synthetic" penicillin is not precisely a true definition of Bristol's new penicillin. The usual fermentation product is altered so that instead of penicillin G being the final product, 6 amino penicillanic acid is obtained; this chemical has no antibacterial potency. Although 6 APA can be prepared chemically in a pure state, the fermentation method is cheaper, probably more dependable and, at the same time, the preferred method of production. The side chain which makes 6 APA antimicrobially active is added synthetically—thus the name "synthetic" penicillin.

In the laboratory the new penicillin has substantially the same spectrum of activity as other penicillins, e.g. penicillin G and V. It is exceedingly potent against gram-positive and gram-negative cocci and a few other microbial species. It is not active against practically all gram-negative bacilli. In the first reports, Bristol claims that it is inhibitory to more strains of staphylococci than are other penicillins, but the number of observations made in this area are too few for fair judgment. From our own experiences with it, penicillinase derived from staphylococci neutralizes the new in the same order as it does other penicillins—thus one cannot expect "synthetic" penicillin to alter appreciably the present problems in treatment of staphylococcal disease.

A dosage schedule of any antibiotic can be arranged properly if the following data are available: The amount of drug which is required to inhibit maximally growth of the offending microorganism *in vitro*, and the concentration of drug attained and maintained in human plasma after a stated dose of the drug. *In vitro* sensitivity studies show clearly that milligram for milligram the new product is similar to both V and G. Blood level studies in humans, on the other hand, indicate that "synthetic" penicillin has certain properties which make it superior to orally administered penicillin G at least. When given, for example, in doses of 250 mg., higher blood levels obtain for a minimum of four hours than follow a similar dose of G, whether or not the stomach is empty. The differences between penicillin V and the new product are not nearly so clear cut. In general, levels of V are somewhat less, but the discrepancy is not great, and thus regimens of therapy with one should not be significantly different from the other.

Similarly, when given with meals, single doses of all penicillins are followed by blood levels appreciably lower than those found when the pills are given an hour before or after a meal. For most benefit, then, each should be administered between feedings for best utilization. The loss of absorption of penicillin V and "synthetic" penicillin with meals is significantly less than loss of G.

The suggestion that penicillin V and "synthetic" penicillin are similar in pharmacologic properties and that each is better than penicillin G in substantiated by urinary excretion studies. Following a single dose of G, approximately 15 to 18 per cent can be recovered in a 24-hour collection of urine. Between 30 and 35 per cent of a dose of both V and Syncillin is recovered; thus, significantly more of these is absorbed, distributed and excreted.

General statments about proper regimens of therapy with "synthetic" penicillin are treacherous. It has been shown that, presuming reasonably normal gastrointestinal function, 250 mg. of "synthetic" penicillin t.i.d. supplies adequate protection for the patient with beta hemolytic streptococcal infections of upper respiratory tree and

for pneumococcal infection of lung. This dose is followed by levels in blood and therefore at site of infection in excess of that required for *in vitro* inhibition of both species of cocci for from four to five hours. The recommended eight-hour interval between single doses is safe, for maintenance of levels for the majority of hours each day is not required. Microorganisms require some time, after cessation of exposure to an antagonist, before they recover sufficiently to promote further infection.

On the other hand, a therapeutic regimen for more deep-seated infections, in which the organisms are less accessible, requires higher doses. Any effort to describe all of these would be dangerous. In general, the decision to use the oral route clinically can be made more frequently and securely with the new product than was true when G alone was available. It should, however, be used orally if gastrointestinal function is not normal.

As is true of penicillin V, the new "synthetic" penicillin is stable in acid gastric contents, but this property is essentially unimportant in the arrangement of any dose schedule.

It has been shown in many individuals hypersensitive to penicillin G that the subsequent administration of "synthetic" penicillin is *not* followed by recurrence or persistence of the allergy. While this is interesting at this time, it is probable that allergic reactions to the new penicillin will inevitably develop, for no chemical is free of this kind of untoward side-reaction.

The question about relative dose schedules of intramuscularly administered penicillin G and orally given "synthetic" penicillin can properly be raised. All claims to the contrary notwithstanding, there is as yet insufficient evidence to state categorically that similar doses of intramuscular G and oral Syncillin result in equal protection against a specific infection, regardless of comparable blood levels. On the other hand, it has always been our considered opinion that virtually all bacterial infections caused by organisms highly susceptible to penicillin (the vast majority) can and should be treated by the oral route. "Synthetic" penicillin, and V too, make the opinion more secure, and they extend the usefulness of all new oral products. With this route, allergic reactions probably occur less often, and surely they are less severe when they do appear. There is small difference in cost; there is considerably more convenience to the patient and his physician. Finally, it must be emphasized that the long-described three or five to one discrepancy between oral and intramuscularly administered penicillin no longer obtains when either "synthetic" penicillin or penicillin V is given.

The development of "synthetic" penicillin has major advantages other than clinical. Its clinical prescription is written in milligrams or grams, rather than in the old unitage system. This is sensible, scientific and long overdue. Briefly, 250 mg. of "synthetic" penicillin is equivalent to 400,000 units of penicillin G or V, and between 750 mg. and 1 Gm. will be the daily requirement for management of most infections in adults. More, of course, is required for chronic or deep-seated or more serious diseases with bacteremia.

Syncillin (Bristol) is the first of a whole series of synthetic penicillins, each of which might have attributes which benzyl or phenoxymethyl penicillin does not have. It is likely, for example, that an immediate one will bypass the neutralizing effects of penicillinase produced by staphylococci. Others can be capable of inhibiting all or most species of gram-negative bacilli. These and other effects certainly can be anticipated.

It is good to see this kind of research in the field of penicillins. The original is still the most effective and safest antibiotic of all, and even better ones will make the physician's job easier.

We can herald the new partially synthesized penicillin as a significant achievement, not particularly because it is appreciably better than its predecessors (for it is not), but in the main because it represents a huge step forward in the development of even more potent and unique ones.—P. A. B.

—Editorial, NEW YORK STATE JOURNAL OF MEDICINE, **60**:-498-500, (Feb. 15) 1960.

ISMS WILL AGAIN CO-SPONSOR HAWKEYE SCIENCE FAIR

The Second Hawkeye Science Fair, designed to stimulate interest in science among Iowa high school students, will be held at the Veterans Memorial Auditorium, Des Moines, April 8 and 9, under the co-sponsorship of the Iowa State Medical Society, Drake University and the DES MOINES REGISTER AND TRIBUNE.

Any boy or girl interested in science and attending an Iowa public, private or parochial school in grades 9 through 12 is eligible. Entry blanks may be obtained from school science teachers or from Hawkeye Science Fair, Drake University, Des Moines 11. The deadline for entering projects is March 15.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines

President's Page

The program for the ISMS Annual Meeting, April 24-27, will be an especially fine one, and the members of the Program Committee and of the Committee on Scientific Work deserve to be complimented for it. The complete schedule can be found on pages 113-124 in this issue of the JOURNAL.

The arrangement of scientific sessions instituted last year has been repeated. Each of them will be a general session, and Monday evening has been reserved for the meeting of all specialty groups. Symposia have been planned on three topics that are of particular interest to all Iowa doctors. The one which is to be presented on Monday morning, April 25, will concern Medicine and Sports, and coaches from throughout the state are being invited to attend along with ISMS members. The one scheduled for Tuesday morning will concern coronary artery disease, and the one to be presented on Tuesday afternoon, vascular lesions.

The meetings of the House of Delegates on Sunday and Wednesday mornings will be important, and all members are encouraged to attend.

I hope that every Iowa doctor will be present for as much of this program as his practice will permit.

John W. Billingsley

President



Doctors' Fees Have Risen Only Moderately

Every once in a while a manufacturing firm benefits considerably from the public's habit of making a generic term out of the trade name of a particular product. For example, General Motors Corporation has had no reason to complain of people's saying "Frigidaire" whenever they mean "electric refrigerator," and Minnesota Mining and Manufacturing Company, despite the expiration of its patents on the material, will continue to benefit from everyone's calling cellophane adhesive by the copyrighted name "Scotch Tape." But physicians don't find it similarly to their advantage that the great majority of Americans are accustomed to speak of all health-care costs as "doctor bills."

PROPORTION OF DOLLAR SPENT FOR MEDICAL CARE BY TYPE OF CARE

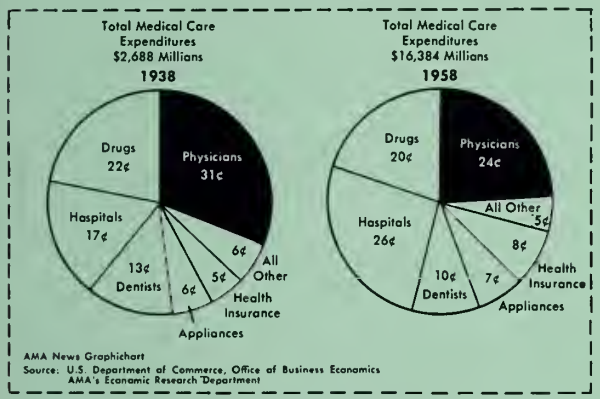


Figure 1

Just as Frigidaire and Scotch Tape were first-comers in their respective fields, physicians' services once constituted the whole of health care. But nowadays, the doctor's share of the health-care dollar is less than 25 cents. Indeed, as the first of the accompanying sets of "pie charts" shows (Figure 1), it has shrunk from 31 cents to 24 cents in the course of 20 years. The largest segment of that dollar now is going to the hospitals, and the only other growing wedge is that belonging to health insurance. In the diagrams, it should be pointed out, "Health Insurance" represents the overhead costs of the companies offering such protection, as distinguished from the sums paid to hospitals and physicians through such instrumentalities.

BY COMPARISON, HEALTH CARE HASN'T GROWN OVER-EXPENSIVE

In the newspapers, a few weeks ago, headlines were given to the fact that medical care costs have risen 44 per cent in the past 10 years, while the general price index was rising only 24 per cent. Those figures are authoritative, but they are nevertheless deceptive. To see the true picture, one needs to take note of the price increases that have occurred over a somewhat longer period. Over the past 20 years, men's haircuts have increased 171 per cent in price; food 151 per cent; automobiles 125 per cent; and men's clothing 110 per cent. In the same length of time, doctors' fees have risen just 84 per cent.

Most of the increase in doctors' charges has occurred gradually and belatedly, and thus all that one can justifiably conclude from the most recently issued set of statistics is that doctors waited rather a long time before adjusting their charges to fit the inflated scale of values that had been instituted, for the most part, shortly after the close of World War II.

HOSPITAL AND DRUG CHARGES ARE LIKEWISE JUSTIFIED

In emphasizing the principal point made in Figure 1—that doctors aren't responsible for the bulk of the current costs of health care—it isn't to be supposed that this article accuses the hospitals and the pharmaceutical manufacturers of profiteering. Quite the contrary. The hospital component of health-care costs doubled during the past 10 years because more people than ever before were willing to be cared for in hospitals rather than in their homes, and because those institutions raised the wage scales of all their employees and reduced their nurses' work week to 40 hours. In addition, newly devised refinements in health care necessitated their purchasing

and installing many costly pieces of equipment and setting up new services.

Senator Kefauver and others have tried to make drug manufacturers look like villains, rather than public benefactors, by pointing to their profit margins on the products that they have marketed successfully. Such investigators choose to overlook the losses that the drug makers must take on products that never reach market, or on ones like the Salk vaccine which deteriorated on their shelves two years ago when the public suddenly and inexplicably grew apathetic about the danger of poliomyelitis. Furthermore, because the drug makers once had been willing to let the government have large quantities of certain products at the cost of the raw materials plus the cost of manufacturing them, the lawmakers chose to assume that they should offer those products for sale at the same price in the open market. Such are the perils of the businessman who ventures to be public-spirited!

MODERN HEALTH CARE IS WORTH THE PRICE BEING ASKED FOR IT

Aside from the costs of inoculations and other preventive measures, all medical care expenses can be classed as repair bills, and all of us are especially averse to paying charges of that sort. No one thinks anything of taking an $800 first-year depreciation on his automobile, but he is certain to throw a fit if he is confronted with shop charges totaling as much as a quarter of that figure. Thus, an individual who lacks health insurance finds a hospital room-rate schedule, the cost of a box of capsules or a doctor's estimate of his fee for a particular course of therapy especially hard to accept.

But when the patient contemplates such charges and remembers what they used to be, he should think also of the improvements that have been made in medical technics within the past 20 years. In 1938 or 1940, for example, patients stayed in the hospital for an average of 14 days; now they stay for an average of eight. Thus, even though the cost of hospitalization has doubled, the usual hospital bill is only slightly higher than it was then.

An appendectomy meant three weeks in the hospital in those days; now it means just five days.

PERCENTAGE OF U. S. CIVILIAN POPULATION WITH HEALTH INSURANCE

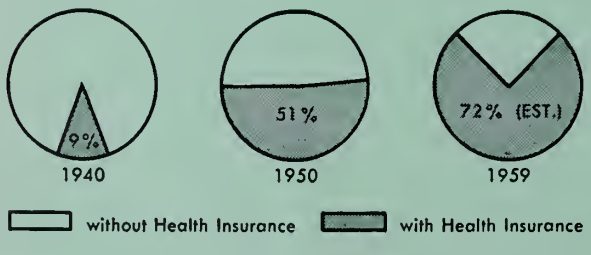


Figure 2

PROPORTION OF CONSUMER DOLLAR SPENT BY TYPE OF PRODUCT

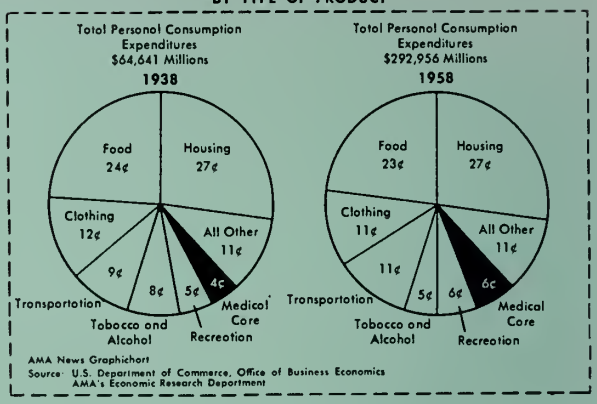


Figure 3

Pneumonia patients left the hospital after three to six weeks, if they left at all, and then spent an equal time finishing their convalescence at home. Now, many of them aren't required even to enter the hospital, and almost all of them recover about as promptly as they would after a bad cold.

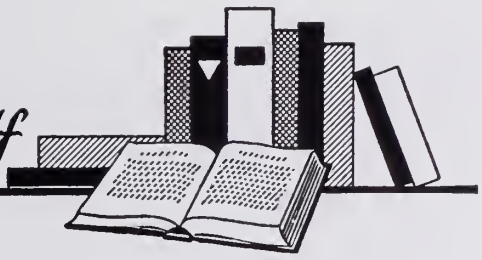
Another factor that patients should bear in mind when they contemplate the new price tags on health care is the reduction that has been effected in their loss of earnings due to sickness. It's true that most employees, today, are granted rather liberal amounts of sick leave, but those amounts are sufficient only because recoveries are far quicker and more regularly complete than they used to be. And if the patient happens to be a wife and mother, her being able to return to her housekeeping within a week or 10 days is still highly important from a financial as well as from a humanitarian point of view.

PREPAYMENT PLANS EASE HEALTH COSTS FOR MOST PEOPLE

The answer to the problems posed by advancing medical care costs is voluntary health insurance. As the second set of "pie charts" shows (Figure 2), the time is not far distant when virtually every American citizen not on relief will be protected against medical expense by one or another of these policies. In 10 of our 50 states (Minnesota, Michigan, Illinois, Ohio, Pennsylvania, New York, Connecticut, Rhode Island, Massachusetts and Vermont), upwards of three-fourths of the population is so protected, and in 31 of the remaining states one-half or more of the people are covered. For the country as a whole, the figure is 72 per cent.

When the American people pay no more for medical care than they do for recreation (Figure 3), when prepayment plans prevent that cost from becoming a burden for the vast majority of them, and when medical care is constantly—even spectacularly—becoming more efficient, we should count our blessings, rather than complain of our misfortunes!

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

CESAREAN SECTION, ed. by *Edwin J. DeCosta*, M.D., and ADVANCES IN GYNECOLOGIC SURGERY, ed. by *S. B. Gusberg*, M.D. (Vol. 2, No. 4 of CLINICAL OBSTETRICS AND GYNECOLOGY. New York, Paul B. Hoeber, Inc., 1960. $18.00 per year for four issues).

A PRACTICAL GUIDE TO GENERAL SURGICAL MANAGEMENT, by *Julian A. Sterling*, M.D. (New York, Vantage Press, Inc., 1960. $3.00).

THE RELUCTANT SURGEON: A BIOGRAPHY OF JOHN HUNTER, by *John Kobler*. (New York, Doubleday & Company, 1960. $4.95).

ENCYCLOPEDIA OF MEDICAL SYNDROMES, by *Robert H. Durham, M.D.* (New York, Paul B. Hoeber, Inc., 1960. $13.50).

YEAR BOOK OF DRUG THERAPY (1959-1960 YEAR BOOK SERIES), ed. by *Harry Beckman*, M.D. (Chicago, The Year Book Publishers, Inc., 1960. $8.50).

TEXTBOOK OF OTOLARYNGOLOGY, by *David D. DeWeese*, M.D., and *William H. Saunders*, M.D. (St. Louis, The C. V. Mosby Co., 1960. $8.75).

NEW AND NONOFFICIAL DRUGS, 1960, evaluated by the AMA Council on Drugs. (Philadelphia, J. B. Lippincott Co., 1960).

DRUGS OF CHOICE, 1960-1961, ed. by *Walter Modell*, M.D. (St. Louis, The C. V. Mosby Company, 1960. $13.50).

BOOK REVIEWS

UPPER DIGESTIVE TRACT (PART I OF VOLUME III, DIGESTIVE SYSTEM, CIBA COLLECTION OF MEDICAL ILLUSTRATIONS), by *Frank H. Netter*, M.D. (Summit, New Jersey, Ciba Pharmaceutical Products, Inc., 1959. $12.50).

Ciba Pharmaceutical Products, Inc. is publishing two sets of books for the benefit of the medical profession. One of its series of "Symposia," and the other is the collection of a well-known medical illustrator's works, of which the present volume is the latest. Frank Netter first began to draw medical illustrations to beautify advertisements, but recently he has begun a series of rather large, thin volumes describing pictorially and verbally the details of practical normal anatomy, physiological anatomy and pathological anatomy as it confronts the physician. To date, Vol. I (nervous system), Vol. II (reproductive system), and two parts of Vol. III (the present book and one on the liver, biliary tract and pancreas) have been published. Part 2 of Volume III (lower digestive tract) will be published in 1961.

The first half of this volume is devoted to anatomy and physiology, and the latter half to pathological anatomy. Everyone is acquainted with the excellence of Dr. Netter's drawings. For this volume, he has travelled over two continents in order to consult authorities in the field for the sake of accuracy. Along with the colored drawings are descriptions, in considerable detail, of the material depicted.

This book, along with the others in the series, is excellently conceived and will fill a very practical purpose in the doctor's office when he wishes to describe a condition to a patient or a patient's relatives. It is by far the most comprehensive series of the sort yet attempted, and Dr. Netter is to be highly commended.—*Daniel A. Glomset*, M.D.

MANUAL OF SKIN DISEASES, by *Gordon C. Sauer*, M.D. (Philadelphia, J. B. Lippincott Company, 1959. $9.75).

This book was written in response to a student's request for a short work on dermatology. It has only 269 pages, but it contains 151 large illustrations and 28 color plates.

It is probably the nearest approach to a simple compendium on skin diseases and their treatment that I have seen.

Only the common diseases are included in the first part of the book, the text proper. Therapy is detailed in the form of informal conversations between the patient and physician.

An unusual feature is the Dictionary-Index of the second part of the book, where in addition to an index one finds a large number of the rarer dermatological conditions listed and defined.

This is a good book for the medical student and for the general practitioner. I recommend it.—*S. Greenhill*, M.D.

THE YEAR BOOK OF PEDIATRICS (1959-1960 Year Book Series), ed. by *Sydney S. Gellis*, M.D. (Chicago, The Year Book Publishers, Inc., 1959. $8.00).

The newest issue of the familiar YEARBOOK OF PEDIATRICS, edited in his usual able manner by Dr. Sydney S. Gellis, presents a very valuable and concise review of the past year's literature in the world of pediatrics medicine. The editorial comments by various authorities add greatly to the usefulness of the abstracts presented in this volume.

All physicians who practice pediatrics will find this book a valuable review of the developments that have occurred during the past year.—*M. E. Alberts*, M.D.

LIVING BEYOND YOUR HEART ATTACK, by Eugene B. Mozes, M.D. (New York, Prentice-Hall, Inc., 1959. $3.50).

Dr. Mozes has written a book to dispel the fears of the coronary patient. The book is of moderate size, and is printed in rather large type on non-glossy paper. The gist of it is a common sense approach to the coro-

nary disease problem. Such facets as symptoms, diagnosis, treatment, anticoagulants, diet, sex, tobacco and exercise are dealt with most pleasantly.

In this day and age of increasing knowledgability in patients and growing numbers of popular-type essays and books on medical topics for them to read, the present volume is a welcome addition. The whole tenor of the book tends to reduce the patient's fears by making him better informed about his disease.

It would be a good idea for some bigoted doctors to peruse these pages, too, for many of the sensible ideas set forth herein are contrary to the practice of some physicians. The reviewer opines, however, that the statements in the book are well thought-out and sound, and he hopes the volume will find its way into many doctors' waiting rooms.—*Daniel A. Glomset*, M.D.

MANAGEMENT OF THE AGED SURGICAL PATIENT, by *Sidney E. Ziffren*, M.D. (Chicago, The Year Book Publishers, Inc., 1960. $7.50).

With ever-increasing emphasis being of necessity placed on diseases and conditions of the aged, Dr. Ziffren's book is most timely. It is not intended as a textbook of surgery, but instead reviews some of the special considerations in surgery of the aged. These include preoperative preparation, anesthesia, postoperative care and surgical complications in the aged patient. In addition, certain specific entities are discussed, such as the acute abdomen, gastrointestinal bleeding, arterial disease, common fractures and some urological problems.

I feel that Dr. Ziffren does a masterful job in his introduction to this book in reminding us of some of the non-scientific points that are terribly important in the care of the aged. For example, in referring to radical cancer surgery, he states, "The first responsibility of a surgeon is to relieve pain and suffering; he must not contribute to it."

This is an interesting and well-written book.—*Charles C. Edwards*, M.D.

NEW HEART ASSOCIATION SERVICES

Resource volumes on cardiovascular diseases are being distributed to hospital medical libraries in many parts of the state through the Heart Councils of the Iowa Heart Association. They are actually binders containing publications of the AHA and other organizations relating to diagnosis, treatment and rehabilitation of cardiovascular patients. Certain of the items are for the doctor's assistance in instructing his patients. As new issues or additional materials become available, they will be distributed and can be substituted or added.

This program also provides for individual physicians to obtain selected single items of the professional publications and quantities of aids for patients. Professional films, slides, exhibits and tapes are offered on a "free loan" basis.

A new professional film designed to acquaint the general practitioner and the nurse with concepts and technics basic in the care of stroke patients has been released by the AHA. Titled "Cerebral Vascular Disease: The Challenge of Management," it demonstrates the latest methods for aiding recovery and rehabilitation of stroke patients through the use of generally available services and equipment.

The film may be ordered through the Iowa Heart Association, 2100 Grand Avenue, Des Moines 12.

CONGENITAL HEART DISEASE

Congenital heart disease will be the subject of the Deborah Hospital's second International Symposium on Current Concepts in Medicine, to be held at the Bellevue Stratford Hotel, Philadelphia, April 28, 29 and 30, 1960. Specialists in every branch of cardiology will present papers on the most recent developments in the diagnosis, treatment and surgical correction of heart ailments present from birth. The meetings are open to all physicians, and there will be no registration fee.

Deborah Hospital, in Brown Mills, New Jersey, was established 38 years ago as a tuberculosis institution, but in recent years it has expanded its services to include the treatment of all chest diseases, with emphasis on heart surgery.

The first session, April 28, will concern pathogenic factors, and the essayists will be Drs. Bradley Patten, Theodore Ingalls, Geoffrey Dawes and Maurice Lev. The second session on that day will take up definitive diagnosis, and the speakers are to be Drs. Thomas W. Mattingly, Demetrio Sodi-Pallares, Andre Cournand, F. Mason Sones and I. J. Fox. The third session on the same day will deal with prognosis, and papers will be read by Drs. Paul Wood, Richard Varco, Daniel Downing, Jorge Espino Vela, Anthony Diehl, Luis Becu and Robert Miller.

The first session on April 29 will concern surgical tools, and the essayists will be Drs. Conrad Lam, John Lewis, John Y. Templeton, Richard A. DeWall, Gumersindo Blanco, Ivan Brown, Vincent L. Gott and Charles Hufnagel. At the second meeting on that day, the topic will be special surgical considerations, and the speakers will be Drs. Frank Damman, Donald R. Ferguson, Paul Lurie, Charles P. Bailey, Donald Effler and Hu Blake. The third session April 29 will be on surgery and will feature Drs. C. Walton Lillehei, Conrad Lam, Henry T. Nichols, Thomas G. Baffes, and Ake Senning, and Sir Russell Brock.

At the final session, Saturday, April 30, the topic will be management of the cyanotic newborn, and a panel will discuss it. The participants will be many of the previous speakers, plus Drs. William Mustard, Aldo Calo and Harry Goldberg.

H.R.4700

The Forand Bill, known as H.R.4700, proposes to amend the Social Security Act to provide health insurance benefits to all those receiving, or eligible to receive, social security benefits. This, in brief, would include 60 days' hospitalization per year, up to 120 days' coverage in nursing homes, and certain types of surgery, all at federal government expense.

Unfortunately, when it hears that physicians oppose the Forand Bill, the American public believes that the doctors have a selfish interest and are thinking only of themselves. This belief is as far from the truth as possible. Physicians are expressing themselves because they understand the pitfalls and shortcomings of the proposed bill, and because it is they who administer health care to the aged. Everyone recognizes and agrees that there is a problem concerning care of the aged. We, as a profession, also realize that it will be an ever-increasing problem.

Statistics show that the life expectancy of the people of the United States is steadily increasing, and though the medical and surgical problems of elderly people aren't unique, a large share of them have such difficulties and are also beset by economic problems of varying severity. But the Forand Bill is not designed to help all of them, or even those of them who are in most need of assistance. There are over 4,000,000 people in this older age group who are ineligible for Old Age and Survivors Insurance benefits. Therefore, the Bill leaves too great a percentage of the aged without help. The real problem is that of the indigent aged, and it is among them that one finds most of the 4,000,000 people who are not eligible for these social security benefits. Thus, from the aspect of coverage, the Forand Bill is deficient.

The Forand Bill would set up an agency of the federal government to administer this program of medical care. This agency would use social security taxes in providing the proposed medical services. The cost of such a program would be tremendous, and it would continue to rise, just as it has in Great Britain. Under the provisions of the Bill, all persons eligible to receive OASI benefits could qualify for the proposed health services. Hundreds of thousands of people receiving social security benefits—and rightly so, for they paid social security taxes during their years of employment—are actually self-sustaining. These people can purchase anything they need, and can pay for it in cash. For them, the Forand Bill would be merely a windfall—nice to have, perhaps, but solving no problem.

This new program would not be the first to miss its mark by serving large numbers of entirely solvent people. By rash reasoning, the American public seems to look upon government services as benefits that have no cost. Therefore, if eligible, everyone feels free to take advantage of them. Our Veterans Administration Hospitals, for example, require applicants for the treatment of non-service-connected disabilities to sign a pauper's paper, and thousands of them sign the declaration even though they have voluntary insurance coverage or other resources with which to purchase hospitalization and medical care. Thus, government programs for health care have been unnecessarily expensive. Social security taxes are scheduled soon to reach nine per cent of the payroll, but this would be only the beginning if the Forand Bill were enacted. Moreover, despite the increases in social security taxes, the indigent aged would not benefit, since most of them are ineligible for OASI.

Besides wasting tax money, the Forand scheme would have many other serious consequences. Under its provisions, the government would purchase health services for OASI recipients, rather than give them cash with which to pay their doctors and hospitals. Thus, the government would enter as a third party between the physician and the patient, and the physician would be forced to conform to the social security agency's regulations in the details of his management of each case. In consequence, it is certain, the patient's feeling that he had chosen his physician, a man with an interest in and an understanding of his problems, would be endangered. The American people would not want this relationship disturbed or destroyed.

Actually, the Forand Bill is socialized medicine within a limited scope, and it is characteristic of such programs that, once established, they keep expanding, rather than contracting. Thus in only a short time medicine would be completely socialized in the United States.

Socialized medicine was defeated and rejected in 1950, and it can be defeated and rejected again!

Care for the aged is not something that can be

stereotyped by a governmental bureau and administered, in sterotyped form, throughout the United States. The problems of elderly people are individual ones that vary from community to community, and must be treated as such. Our states, counties and communities have been and are studying this problem, and are working out their solutions to it. Various religious and fraternal groups have been and are taking active steps in caring for the aged, without help from the government. Special efforts are being made by non-profit insurance plans and by commercial insurance companies to extend coverage to the aged. Under our American system of free enterprise, voluntary health insurance is now covering additional thousands of elderly people each year.

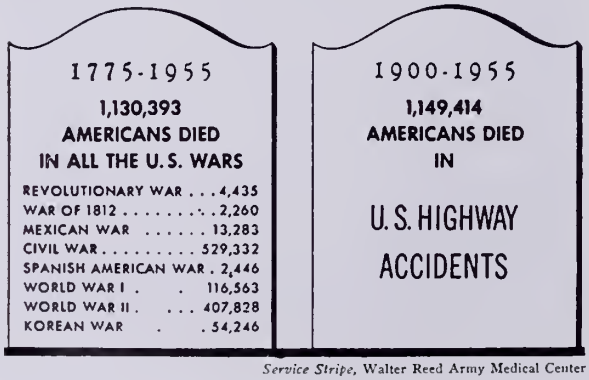
The best way to defeat the Forand Bill or any similar proposal is to show that it is neither practical nor necessary. Most physicians feel they do not have time to take an interest in politics. Yes, physicians are busy, but they are not the only busy people, and it is time for doctors to take an active interest in political matters. It is only proper, because of their knowledge and experience, for them to take an especially prominent role in formulating solutions for the problem of health care for the aged.

If we can show that efforts are being made and that action is being taken, rather than just that words have been spoken and plans put on paper, I am sure that many supporters of the Forand Bill will give non-governmental and local-government groups a chance to try out their ideas.

Each of you, as a physician, because of your insight into the effects that the Forand Bill would have, can help the American people by writing to your U. S. senators and the congressman from your district and telling them your opinion. Tell the lawmakers what is being planned for the future in regard to the problems of the aged. These latter are the facts that your senators and representative want, not just a statement that you are opposed to the Forand Bill.

It also behooves you as a physician to interest other individuals and groups in letting themselves be heard in opposition to H.R.4700.

A Grim Reminder



Service Stripe, Walter Reed Army Medical Center

COURSE ON FRACTURES AND OTHER TRAUMA

The Fourth Postgraduate Course on Fractures and Other Trauma sponsored by the Chicago Committee on Trauma of the American College of Surgeons will be held April 27 through April 30 at the John B. Murphy Memorial Auditorium, 50 East Erie Street, Chicago. Teachers prominent in the field of trauma from the five Chicago medical schools and chiefs of services from leading Chicago hospitals will lead discussions on injuries to the eye, face, neck, chest, abdomen and extremities, on repair of bone and cartilage in trauma, on aseptic necrosis, on the urological complications of fractures, on intramedullary fixation of fractures, on bone grafts and on other related subjects.

The distinguished visiting speakers will include Drs. James E. Bateman, Truman G. Blocker, Jr., Walter P. Blount, David M. Bosworth, Harold B. Boyd, Joseph H. Boyes, Charles J. Frankel, George C. Morris, Jr., Sam A. Morton and Preston A. Wade. They will present lectures on management of open fractures, injuries of the hand, femoral neck and intertrochanteric fractures, roentgenological aspects of trauma to the spine, peripheral nerve injuries, plastic surgery of the face and extremities, athletic injuries, surgical management of vascular injuries and injuries to the neck.

There will be panel discussions on low back pain, abdominal injuries and fractures in children. One evening will be devoted to clinical presentations. A special feature will be practical demonstrations on traction, office technic of aspiration and injection of joints and bursa, transportation and emergency splinting, supination treatment of Colles fractures, strapping of the back and ankle, and manipulative reduction of common dislocations.

The registration fee will be $50. Inquiries should be addressed to Dr. John J. Fahey, Chairman, 1791 West Howard Street, Chicago 26.

SUMMER CAMP FOR DIABETIC CHILDREN

For the twelfth year, the Summer Camp for Diabetic Children will be conducted at Holiday Home, Lake Geneva, Wisconsin, under the auspices of the Chicago Diabetes Association, from July 17 to August 7, 1960. Boys and girls 8-14 years of age are eligible.

As in previous seasons, the camp will be staffed by resident physicians, a nurse, two dietitians and a laboratory technician, in addition to the regular counseling and domestic staff of Holiday House.

Rates are arranged in accordance with individual circumstances. Inquiries should be directed to the Association, 5 South Wabash Avenue, Chicago 3, Illinois.

MEDICAL HISTORY



The First Rural Public Hospital

VIRGINIA M. LUCKEY

WASHINGTON, D. C.

THE PROGRESS IN the practice of medicine, since its earliest beginnings, has been intimately associated with several other institutions that have been present in the successive societies. The centers for the teaching and the practice of medicine began in the temples, and then slowly moved to the spas, to the medieval universities and finally to the hospitals as we now know them.

The development of the hospital has been a significant part of the history of medicine and of humanity. Thus, it is especially rewarding to look into the conception and development of a particular institution, one which serves as an almost forgotten landmark in the history of hospital development and medical care in the United States.

The Washington County Hospital, in Washington, Iowa, still serves the people of its county, as it has done every day since July 16, 1912, when it opened its doors as the first rural county hospital in the United States.[1] It paved the way for an entirely new era in medical care.

Although there were many large and famous hospitals in the United States at the turn of the century, none of them could be found in the rural areas of the nation. Hospital care, unless one lived close to a large city, was virtually unavailable. Then, here and there, small groups of rural physicians recognized the value of hospital facilities both in providing care for their patients and in advancing their own education, and organized small private hospitals. In Washington, Iowa, the Washington City Hospital was created in 1907 by a group of local doctors and a nurse, in whose house it was located,[2] and the worth of this tiny (five bed) institution was heartily endorsed, a few years later, when the question of constructing a tax-financed county hospital was put to a vote of the county residents.

THE COUNTY-HOSPITAL ENABLING ACT

The legislation which allowed the proposal for the construction of a county hospital to be put to the voters of Washington County, Iowa, was the first of its kind in the United States.

The sponsor of the proposal, C. C. Munger, M.D., was a physician from Spencer, in the opposite corner of Iowa. His ingenuity, courage and tireless concern in helping to solve the hospital problem for rural areas has never been adequately recognized. His was then a radically new idea. Realizing the desperate need of all rural people for hospital care, he helped to write and secured legislative support for a bill designed to permit residents of a county to vote a special tax upon themselves for the construction and maintenance of a county hospital that would serve all county residents. The Munger Bill, as it came to be known, passed the State Legislature in 1910.[3]

THE WASHINGTON DOCTORS' CAMPAIGN WAS CLEVER

The Washington physicians had watched the progress of the Munger Bill in the Legislature, and had a carefully planned campaign to be put into effect as soon as the law passed.[4] In the summer of 1910, when the governor's signature on the new law had scarcely dried, a petition was secured from the necessary number of freeholders, and the proposal for a Washington County Hospital was to appear on the ballot at the November election. During the three months or more that intervened, nothing much was done until the last week before the election.[4]

During the week prior to election day, however, the Washington County Medical Society unleashed a barrage of campaign material. Every conceivable means of communication was used. Leaflets and handbills were given to storekeepers for inclusion in their packages, and schoolchildren were given materials by their teachers. On November 8, the day before the election, every newspaper in the county published an editorial urging adoption of the resolution.

When the ballots were counted, the measure had carried by a larger majority than had been expected. The whirlwind campaign during the last few days before the election had been so sudden and overwhelming that "the opponents were never able to arouse any organized opposition."[4]

Out of the eight counties in which the voters'

Miss Luckey is a student at the Howard University medical school. She wishes to thank Dr. C. A. Boice, of Washington, Iowa, for making available much of the material that she has cited in her bibliography, and for his many interesting recollections of the early years of the Washington County Hospital.

approval was sought for the construction of county hospitals that first year, Washington was the only one in which the campaign was conducted in this manner, and it was the only one in which approval was secured. In the other seven counties, the attempts had to be repeated at later elections.

VOLUNTARY CONTRIBUTIONS WERE NEEDED

Although $25,000 had been appropriated for the construction of the Washington County Hospital, it was soon discovered that the building, as planned, would require some $10,000 or $15,000 more than the original sum. After a great deal of discussion[5] and some opposition, various individuals and organizations contributed money and equipment sufficient to permit the continuance of the project. An 11-acre tract of land on the edge of town was donated for the site of the hospital by Mr. W. P. Wells. Thus, when the hospital opened its doors, on July 16, 1912, it had been built and equipped for a cost of $41,000 and had a capacity of 35 or 40 beds.[6]

Curiously enough, although the hospital had been built to serve Washington County residents, as either paying or non-paying patients, the first two individuals admitted were non-residents. Quite accidentally, the first surgical patient was a resident of Dr. Munger's community who had been taken ill more than 200 miles from home while visiting her son in Washington. The hospital had been open for two days before receiving that first patient. The second one was a tramp who had collapsed on a downtown Washington street.

THE WASHINGTON COUNTY HOSPITAL HAS BEEN A MODEL

Steadily throughout the past 47 years, the Washington County Hospital has helped to teach both the physicians of the area and the people of the county the advantages of hospital care. In addition, it served during its early years as a model rural hospital, and it was closely watched and frequently visited by people from other states and counties who were interested in establishing like institutions.

During its first year of operation, 131 patients were admitted,[7] but during 1957, a total of 1,140 patients spent 10,385 patient days there.[8] The entire budget of the hospital has always come from local taxes, patient fees and private gifts. No federal tax money has ever come to the hospital.

By 1939, it became evident that the hospital's capacity was no longer adequate. In June, 1940, an election was successfully carried, and an additional 15 beds became available in 1942, giving the institution its present capacity of 54 beds and 13 cribs.

FURTHER CONSTRUCTION MAY BE INADVISABLE

With the advent of improved roads and other means of transportation, and particularly since the introduction of more complicated, technical and expensive medical procedures and equipment, the wisdom of further construction of such small community and county hospitals has become debatable. But regardless of their future, the service which these hospitals have rendered is evidenced by the fact that within a short time after the passage of the Munger Bill, in Iowa, more than 14 other states adopted similar legislation and built numerous small hospitals.

The brightest and busiest era of the rural public hospital may be drawing to a close in many parts of the nation, but many thousands of rural people will continue to depend upon them for care in most of their illnesses. Doctors, too, will continue to benefit from the exchanges of medical ideas that take place there and from the scientific programs that they occasionally sponsor.

WASHINGTON COUNTY DOCTORS REMEMBER DR. MUNGER

The physicians privileged to use the Washington County Hospital are sure to remember Dr. Munger, for a bronze plaque, presented to the institution in June, 1947, in the thirty-fifth year of its operation, commemorates the man with whom and the place in which a new concept in hospital care began—a man and a place that have been important in the health care of rural people and in the continuing education of country doctors.

The plaque is inscribed:

"In Memoriam, Elbert Ervin Munger, M.D., 1867-1946, physician, American Humanitarian, author of the rural county public hospital law under which this hospital was the first built in the nation. This plaque is presented by his children to the citizens of Washington County, Iowa."

REFERENCES

1. Bulletin, Iowa Hospital Association, June, 1947, p. 9.
2. Cowden, Bruce: Ramblings and remnants. WASHINGTON EVENING JOURNAL, Washington, Iowa, July 16, 1952.
3. Code of Iowa, Chapter 26, Senate File 166, Thirty-third Iowa General Assembly.
4. Boice, C. A.: First taxpayers' county hospital, Washington, Iowa. Modern Hospital, Vol. IV, No. 4, Apr., 1915.
5. WASHINGTON EVENING JOURNAL, Washington, Iowa, Apr. 21, 1911.
6. Boice, C. A.: Four years of the Washington County (Iowa) Hospital. Modern Hospital, Vol. VII, No. 6. Dec. 1916.
7. DAVENPORT DEMOCRAT, Davenport, Iowa, July 17, 1938.
8. Washington County Hospital Statistical Report, 1957, Washington, Iowa.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

INFLUENZA SUMMARY

The most recent report of the USPHS Communicable Disease Center (January 30, 1960) indicates that influenza has continued to be reported with a sporadic and limited distribution pattern. During the last week of January, influenza outbreaks were first reported from several of the South Atlantic states. During the same week, infection seemed to be subsiding in more northern areas of the eastern seaboard. California and Texas, however, continued to report extensive outbreaks of influenza-like disease. The illness reported in the Los Angeles area, judged from information received by USPHS, appeared to be of a more severe type than that which was prevalent in other parts of the nation.

The latest USPHS reports indicate that localized influenza outbreaks have occurred in at least 29 states, and the District of Columbia. Influenza virus type A2 has been isolated in specimens taken from patients in a total of 16 states. Mortality due to influenza and pneumonia as reported from 108 cities for the week ending January 23 continued to rise, and for the third successive week exceeded the "epidemic threshold." This increase is noted in many regions, but particularly in the Pacific Coast states.

Influenza continues to be reported in all areas of the state of Iowa. In no areas, however, has the incidence been so great that schools, businesses or industries have closed because of absenteeism on that account. In a few areas, we have estimated that the absences from school during the last part of January and early February were around 10 per cent. This is only slightly in excess of the normal expected school absences at this time of year.

NURSE TRAINEESHIPS

Seven institutions in six states have received traineeship grants to enable professional nurses to attend short-term, intensive training courses in administration, supervision and teaching. These are the first awards under a recent expansion of the U.S.P.H.S. Professional Nurse Traineeship Program, now in its fourth year.

Two of these are in Iowa. From February 8 to 12, a head-nurse workshop was held at S.U.I., dealing with factors that foster or inhibit improvement of patient care. From March 21 to 25, a short course in communicable disease nursing and epidemiology for administrators, supervisors and educators in nursing in hospitals and community health agencies will be held at the Iowa State Department of Health, in Des Moines. Miss Mattie Brass is the program director.

VACCINATION OF DOGS AGAINST RABIES

Rabies is reported in dogs as well as in several other species of domestic and wild animals in Iowa each year. The dog normally lives in close association with man, and is capable of inflicting severe bite wounds. For these two reasons, most of the exposures of man to rabies are caused by rabid dogs. Elimination of rabies among dogs would thus reduce the number of persons who take the anti-rabies preventive (Pasteur) treatment each year.

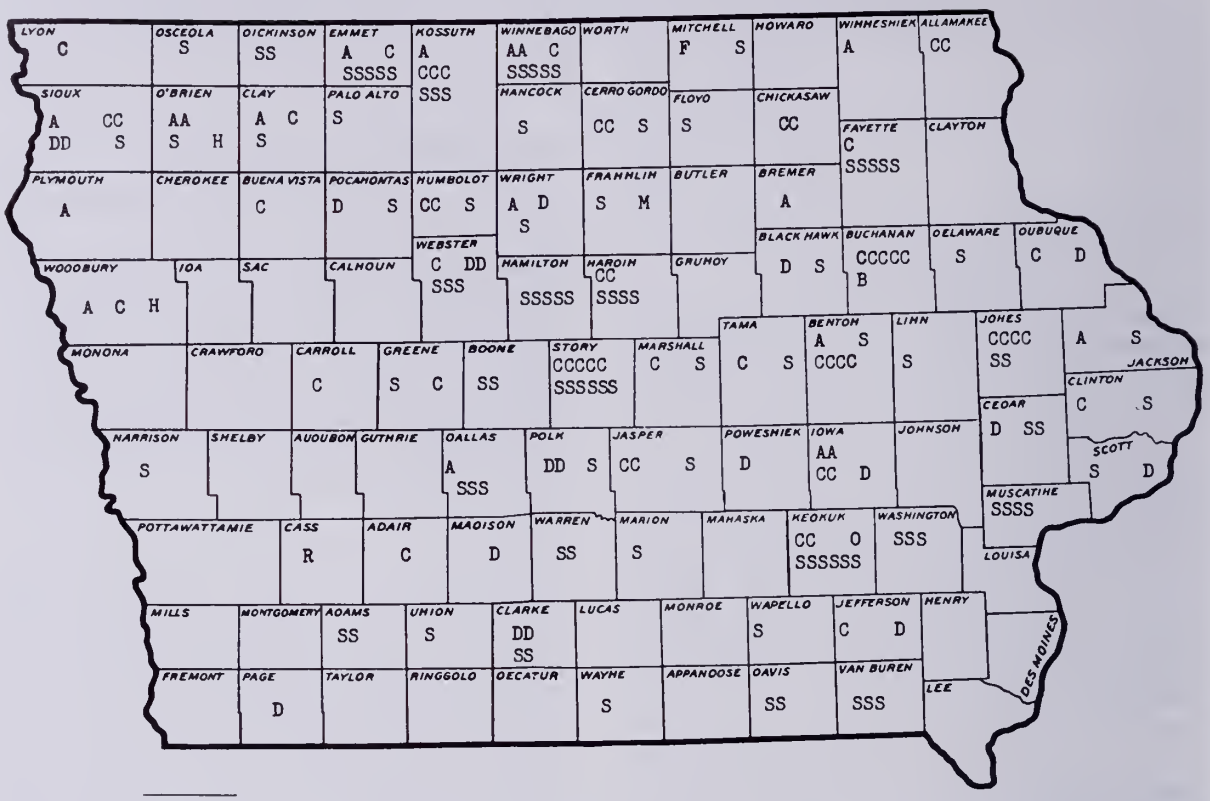
Anti-rabies vaccination of dogs does give protection against the disease. Vaccination has been proved effective in laboratory experiments as well as in actual field conditions. The U. S. Army requires anti-rabies vaccination of all pets kept at Army posts or camps. Without exception, the results from this action have been good. Some Army camps have been located in areas where rabies was present. In these instances, rabies did not develop in the vaccinated dogs belonging to Army personnel, even though they mingled with unvaccinated dogs that lived in adjacent areas and that included some rabid animals. In Iowa, no rabies has been reported among vaccinated dogs.

Anti-rabies vaccination causes practically no discomfort to the dog, and it is safe. All vaccine for animal use must pass the rigid safety and potency requirements of the U. S. Department of Agriculture.

The vaccination consists of injecting a small amount of grayish-tan vaccine into the muscle or under the skin of the dog. The vaccine causes the dog to acquire resistance to the disease, but it takes a little time. The full degree of protection is not reached until about 30 days after the admin-

RABIES IN ANIMALS IN IOWA, 1959

County Distribution of Reported Cases by Species*



* All cases confirmed by laboratory examination.

Legend	*Cases*
S-Skunk	101
C-Cattle	55
D-Dog	19
A-Cat	18
H-Hog	2
B-Badger	1
F-Fox	1
M-Muskrat	1
O-Horse	1
R-Raccoon	1
Total	200

istration of the vaccine. Thus, the dog should not be allowed in contact with rabid animals during the 30-day period.

Investigations show that almost all of the dogs with rabies reported in 1960 were infected by rabid wild animals. This was true of both city and farm dogs. Thus, it is important that dogs in both urban and rural areas be protected against the disease by vaccination. Anti-rabies vaccination of pet animals other than dogs is also recommended.

Vaccination of young puppies is not always effective. Therefore, if puppies under six months of age are vaccinated, they should be revaccinated when they reach six months of age.

Every dog owner is urged to take his dog to a veterinarian for an anti-rabies vaccination. At the time of vaccination, the veterinarian usually furnishes a vaccination certificate and a small metal tag for the dog. Protect your pet, your family and yourself. Vaccinate your dog against rabies!

PRINCIPAL CAUSES OF DEATH

The 1,647,886 deaths that occurred in 1958 gave the nation a death rate of 9.5 per 1,000 population, compared to 9.6 in 1957, according to a February 5 report by the National Office of Vital Statistics.

The death rates for heart disease and cancer, 367.9 and 146.9 per 100,000, respectively, were lowered slightly from 1957. The rate for deaths from vascular lesions remained about the same. The death rate from accidents, 52.3, was almost seven per cent lower than the 56.0 of 1957. Chiefly as a result of the influenza epidemic of 1957-1958, the death rate from influenza and pneumonia was 33.2 per 100,000, down from 35.8 in 1957.

MORBIDITY REPORT FOR MONTH OF JANUARY—1960

Disease	*1960 Jan.*	*1959 Dec.*	*1959 Jan.*	*Most Cases Reported From These Counties*
Diphtheria	1	0	1	Scott
Scarlet fever	341	153	351	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	100	396	2638	Buena Vista, Linn, Polk
Whooping cough	10	23	11	Cerro Gordo, Polk
Brucellosis	40	21	10	Scott
Chickenpox	848	332	749	Des Moines, Polk, Scott
Meningococcic meningitis	0	1	0	
Mumps	294	160	402	Linn, Polk, Scott
Poliomyelitis	0	2	0	
Infectious hepatitis	53	25	24	Monona, Palo Alto, Scott, Woodbury
Rabies in animals	19	18	20	Iowa
Malaria	0	0	0	
Psittacosis	0	1	0	
Q fever	0	0	0	
Tuberculosis	51	41	39	For the state
Syphilis	110	61	100	For the state
Gonorrhea	83	73	66	For the state
Histoplasmosis	0	17	0	
Food intoxication	0	0	60	
Meningitis (type unspecified)	3	8	1	Dallas, Linn, Scott
Diphtheria carrier	0	0	0	
Aseptic meningitis	1	2	0	Polk
Salmonellosis	1	2	1	Polk
Tetanus	1	3	0	Dallas
Chancroid	0	1	0	
Encephalitis (type unspecified)	1	1	1	Delaware
H. influenzal meningitis	0	2	0	
Amebiasis	1	2	1	Cherokee
Shigellosis	1	3	5	Humboldt
Influenza	1359	2	27	Johnson, Linn, Polk, Scott, Woodbury

Coming Meetings

(Continued from page 154)

April 21-22	**Southern Counties Regional Postgraduate Institute.** Palm Springs Riviera, Palm Springs
April 21-22	**Respiratory Physiology in Childhood.** University of Kansas School of Medicine, Kansas City, Kans.
April 21-23	**Medical Association of the State of Alabama.** Admiral Semmes Hotel, Mobile
April 21-23	**Otolaryngology for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
April 21-23	**Surgery of Hernia.** Cook County Graduate School of Medicine, Chicago
April 23	**Palo Alto Clinic Third Annual Symposia (Clinic and Palo Alto Medical Research Foundation).** Clinic Auditorium, Palo Alto
April 23	**Symposium on Pediatric Surgery.** University of California, San Francisco
April 23	**Washington State Obstetrical Association.** Portland
April 24-29	**John A. Andrew Clinical Society.** Tuskegee Institute, Alabama
April 24-30	**International Academy of Pathology.** Memphis
April 25-27	**American Proctologic Society.** Shamrock Hilton Hotel, Houston
April 25-28	**Nebraska State Medical Association.** Hotel Cornhusker, Lincoln
April 25-29	**Course in General Surgery.** University of California, San Francisco
April 25-29	**Pediatric Surgery.** Cook County Graduate School of Medicine, Chicago
April 25-30	**American Academy of Neurology.** Eden Roc Hotel, Miami
April 26-28	**Connecticut State Medical Society.** Hamden High School, Hamden
April 26-29	**Industrial Medical Association.** Rochester, New York
April 27-29	**Middle States Public Health Association.** Indianapolis
April 27-30	**American College Health Association.** Toronto, Canada
April 27-30	**Fourth Postgraduate Course on Fractures and Other Trauma (Chicago Committee on Trauma of the American College of Surgeons).** John B. Murphy Memorial Auditorium, Chicago
April 28-29	**Regional Postgraduate Institute (San Joaquin Valley Counties and University of Southern California School of Medicine).** Ahwahnee Hotel, Yosemite
April 28-30	**American Association of Pathologists and Bacteriologists.** Hotel Peabody, Memphis
April 28-30	**Valley Children's Hospital Spring Clinics.** Roosevelt High School Auditorium, Fresno
April 28-30	**Congenital Heart Disease (Deborah Hospital, Brown Hills, New Jersey).** Bellevue-Stratford Hotel, Philadelphia
April 28-30	**Southern Society of Anesthesiologists.** Washington, D. C.
April 28-May 1	**Annual Meeting, Hawaii Medical Association.** Honolulu
April 30-May 1	**Postgraduate Medical Symposium (University of California at Los Angeles).** Grossmount Hospital, San Diego
April 30-May 1	**Southeastern Dermatological Association.** Nashville
April 30-May 3	**North Dakota State Medical Association.** Dacotah Hotel, Grand Forks

WOMAN'S AUXILIARY

to the

IOWA STATE MEDICAL SOCIETY

1960 Annual Meeting, Des Moines

PROGRAM

MRS. E. A. LARSEN, *Presiding*

Sunday, April 24

2:00-4:00 Pre-Convention Board Meeting, East Room, Hotel Savery—State officers, councilors, county presidents, and committee chairmen

6:30 Dutch Treat Supper (ALL Board members, convention committee chairmen, and husbands) Garden Room, Hotel Kirkwood

Monday, April 25

8:00-4:00 Registration, Mezzanine, Hotel Savery
ALL physicians' wives welcome

8:30-11:00 Hospitality Room—Terrace Room, Hotel Savery
Hostesses—Mahaska County Auxiliary—District IX

9:30 Conference of Delegates—Terrace Room
Call to Order—Mrs. E. A. Larsen, Centerville, president
Invocation—Rabbi Irving A. Weingart, Des Moines
Auxiliary Pledge—*I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals.*
Greetings—Mrs. Louis Goldberg, Des Moines, president, Polk County Auxiliary
Response—Mrs. R. F. Nielsen, Cedar Falls, state president-elect
Introductions
National president, Mrs. Frank Gastineau, Indianapolis, Indiana
State officers, district councilors, county presidents and state committee chairmen
Convention chairman, Mrs. J. T. Bakody
Guests
Recommendations of Reading Committee (for acceptance of previous annual meeting minutes)
Convention Rules of Order—Mrs. D. C. Wirtz, Des Moines, parliamentarian
Treasurer's Report—Mrs. J. H. Matheson, Des Moines
Report of Finance Committee—Mrs. R. E. Hines, Des Moines
Presentation of Auditor's Report—Mrs. R. E. Hines, Des Moines
Report of 1960 Nominating Committee (first reading)—Mrs. F. H. Entz, Waterloo
Election of 1961 Nominating Committee

11:00 "Getting to Know US"—Round Table Discussion
Chairman, Mrs. R. F. Nielsen, Cedar Falls
Memorial Service—Mrs. D. W. Todd, Guthrie Center

11:30 Recess for Luncheon

12:00 Luncheon—Mrs. E. A. Larsen, presiding
Guest Speaker—Mrs. Frank Gastineau, national president

2:30 "Getting to Know YOU" Tea—John R. Mott Room, Y. M. C. A.
Honoring Mrs. Frank Gastineau, Indianapolis, Indiana, president, Woman's Auxiliary to the American Medical Association, and Mrs. E. A. Larsen, president, Iowa Auxiliary
Special Guests: Past-presidents of the Woman's Auxiliary to the Iowa State Medical Society
Guest Speaker—"Mrs. America," Mrs. L. C. Priebe, Des Moines

Tuesday, April 26

8:00-12:00 Registration, Mezzanine Floor, Hotel Savery

8:30-11:00 Coffee—Hospitality Room, Terrace Room, Hotel Savery
Hostesses—Webster County Auxiliary—District V

9:30 Conference of Delegates—Terrace Room—ALL physicians' wives welcome
Report of Nominating Committee (second reading)—Mrs. F. H. Entz, Waterloo
Election Instructions—Mrs. D. C. Wirtz, Des Moines, parliamentarian
Election of Officers
Election of Delegates to National Auxiliary Convention
Report of Reference Committee—New Business
Convention Courtesy Resolutions
Installation of Officers—Mrs. J. F. Gerken, Waterloo, past president
Report of Registration Committee—Mrs. F. C. Coleman, Des Moines

11:00 "The Doctor's Image Is Important," O. D. Wolfe, M.D., trustee, Iowa State Medical Society

11:30 Recess for Luncheon

12:00 Luncheon in honor of Mrs. E. A. Larsen, retiring president, Terrace Room, Hotel Savery—Mrs. H. C. Merillat, past president, presiding
Guests of Honor:
J. W. Billingsley, M.D., president, Iowa State Medical Society
E. F. Van Epps, M.D., president-elect, Iowa State Medical Society, and chairman of Advisory Board to the State Auxiliary
G. H. Scanlon, M.D., member of Advisory Board
J. H. Sunderbruch, M.D., member of Advisory Board

ATTEND THE PRESIDENT'S COFFEE

Hospitality Room, 8:00-9:30
Monday and Tuesday Mornings

MEET YOUR STATE OFFICERS

AMA AUXILIARY PRESIDENT



Mrs. Frank Gastineau, of Indianapolis, will address the Annual Meeting of the Woman's Auxiliary to the Iowa State Medical Society at luncheon on Monday, April 25.

R. F. Birge, M.D., secretary, Iowa State Medical Society
D. L. Taylor, executive director, Iowa State Medical Society
Presidents of Iowa Interprofessional Association Auxiliaries
Presentation of Community Health Service Award—Mrs. W. K. Hicks, Sioux City, chairman
Presentation of Essay Contest Awards—J. W. Billingsley, M.D., president, ISMS
Inaugural Address—Mrs. R. F. Nielsen, Cedar Falls
Presentation of the Past President's Pin

2:00 "How to Stay Alive as Long as You Live," Mrs. Vern Vance, Omaha, Nebraska
Adjournment

3:30 Post-Convention Board Meeting, East Room, Hotel Savery

7:00 Banquet, Terrace Room, Hotel Savery

9:00 "Spring Frolic"—Dance (Informal)—Grand Ballroom, Hotel Savery. (Benefit Auxiliary Health Educational Loan Fund)

SPRING FROLIC

Tuesday, April 26, 9:00-12:00

Grand Ballroom—Hotel Savery

Benefit

Woman's Auxiliary Health Educational Loan Fund

Evan Morgan's Orchestra

Standard Medical & Surgical Company will sponsor the social hour from 8:30

MILESTONES TO MARRIAGE

This series of nine letters for young people continues to prove popular and helpful in teen-age, whether high school or college, groups. Requests continue to come in at the central office in Des Moines. If you have introduced this series of letters, recommended by the Mental Health Committee of the Iowa State Medical Society for sponsorship by the Woman's Auxiliary, a follow-up on acceptance by students, counselors' reaction to the plan and ways in which the letters are being used would be most interesting to your state officers. A report to Mrs. W. B. Chase, Jr., 690-63rd Street, Des Moines 12, Auxiliary Mental Health Chairman, or to the central office at 529-36th Street will give us further information for this project. Will you please help?

DOCTOR'S DAY

On Doctor's Day, the members of the medical profession, both living and dead, are honored. The idea of setting aside a day of recognition for them originated with Mrs. G. B. Almond, of Winder, Georgia, who proposed that March 30 be chosen for the observation because it was on that day, in 1842, that her fellow Georgian, Dr. Crawford Long, initiated the technic of anesthesia, thereby making what many people believe to be one of the world's ten greatest advances in medicine. Since Dr. Long's contribution is a symbol of the consideration which all doctors have for their patients and of the concern that all of them have for the relief of pain, Mrs. Almond's choice was particularly appropriate.

The commemoration and day of honor dedicated to all doctors was first proposed to the Woman's Auxiliary of the AMA in 1934. It was enthusiastically adopted, and today the occasion is observed by almost every state Auxiliary in the nation.

The red carnation has been adopted as the emblem of Doctors' Day. Many Auxiliaries present each of the physicians practicing in their areas with a red carnation in recognition of the occasion. Other Auxiliaries send greeting cards to the practicing physicians, and lay sprays of flowers on the graves of deceased doctors.

AMEF Note Paper and Envelopes
$1.00 per pack of 10 each

Order from
Woman's Auxiliary
529-36th Street
Des Moines 12, Iowa

Proceeds will be donated to the American Medical Education Foundation

AMEF WRAP-UP

Now is the time for each county AMEF chairman to send in her chapter's "wrap up" contribution (meaning a bigger gift than last year).

Members-at-large, you are urged to join in this AMEF crusade, too. "Wrap-up" your dollars and mail them to your state chairman, Mrs. Lester R. Hegg, 2045 East Fifteenth Street, Rock Valley.

Our national president, Mrs. Gastineau, has announced that the beautiful silver bowl which was presented to her for her work in behalf of AMEF since its inception is to become a "traveling trophy." It will be awarded at the National Convention each year to the state Auxiliary which has made the greatest contribution to AMEF. The winner will be determined on the basis of two factors: per capita contribution, and percentage of increase over the previous year's gift. Besides being privileged to keep the trophy for a year, the winner's name will be inscribed on it. CAN IOWA WIN IT THIS YEAR?

Mrs. Lucille Ritters, national AMEF chairman, says, "We believe that $5.00 worth of support from every member is not too much to expect for this important project."

I wish to thank all of the faithful Auxiliary members who have given generously in previous years, and especially the many individuals who have often given more than the $5.00 that our national chairman regards as a fair sum. I am sure your intentions are good again this year, and I know you will have your name, or your county Auxiliary's name, on the final score that will be distributed in the last month of the Auxiliary year. HURRY, HURRY!

PALMA HEGG

ANNUAL REPORTS

If you are a president of a county medical Auxiliary, a chairman of a committee at the state level or a state officer, a report of your work the past year is due, if you haven't already submitted it. Gather all the information regarding your activities, projects completed and those on which you are working, so your report in the Annual Report Book will relay your interest, ideas and accomplishments in our United Front Campaign. Activities which seem routine to you may carry just that new idea needed by another Auxiliary. What better way to share your successes than through your annual report.

HORIZONTAL VIEW OF LIFE

Next time I start to take a trip
There won't be any ice!
Being tied to a hospital bed
Is anything but nice!

I have no kick about the food,
Nor yet the nurses' care;
It's just that being tied like this
I can't *GO* any where!

So here I lie, flat on my back,
With lots of time to think.
Aside from this one broken leg,
I'm really "in the pink."

We started out that Sunday morn
To attend a Safety meeting.
We thought it safe, though the night before,
It had been raining, sleeting.

We took a different route that day
So "Doc" could make a call.
The highway to that certain place
Just wasn't bad, at all.

And then we hit some icy road
And skidded down a hill.
The door flew wide and threw me out—
Oh! it was quite a spill!

We'd hit a bridge, or some such thing—
There was an awful thud;
And then the next thing that I knew
I was lying in the mud.

They picked me up and brought me here,
And here I've had to stay;
And from the way things look right now,
I'll be here many a day.

To help the tedious hours to pass
Are thoughtful folks, like you:
Who spend their time in thinking up
The nicest things to do!

If misfortune overtakes *you*
And you find yourself up ended,
I hope you'll find, as I have done,
It's nice to be befriended.

But if you've a yen to hide your age,
You'd best not have a wreck:
They'll wind up telling all the world—
And that's not fair, by heck!!

I've racked my brain to try to find
The proper words to say;
But it all boils down to just three words:
"I THANK YOU"—Fairie Mae.

FAIRIE MAE LARSEN

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. E. A. Larsen, 323 Oak Street, Centerville
President-Elect—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. H. C. Merillat, 116 Lincoln Place Drive, Des Moines 12

On the Behavioral Sciences

NORMAN B. NELSON, M.D.

DEAN, S.U.I. COLLEGE OF MEDICINE

PREFACE

THE ONLY RELATION that a dean of a college of medicine has to hypertension, the subject of all but one of the ensuing presentations, is that he himself acquires it from the frustrations of his job. I do appreciate, however, the opportunity that I now have to send my respects and greetings to the physicians of Iowa, and for the chance to communicate with you. I am pleased and grateful for the excellent relationship that exists here in Iowa between the College of Medicine and the physicians of the state. I know of no other state that can surpass Iowa in this regard.

This year, I am not even going to talk about the school. Rather, I shall pass on some personal thoughts for your consideration.

WHAT CAN BE MADE INTO A SCIENCE?

Robert Frost, the great poet, in a TV interview, prophesied concerning this generation: "We are going to discriminate once and for all—what can be made a science of and what can't be made a science of. And we are going to settle that. There's a whole half of our lives that can't be made a science of—can't ever be made a science of. And we are going to know more about that before we get through this period. That's what it will be remembered for." Wm. Barrett, the philosopher, says, concerning Frost's comments, "If the poet is right in his prophesy for our age, if we really do discriminate what really can and cannot be made a science of in human life, then this would be an achievement more significant for the future of mankind than the creation of jet planes, missiles, or atomic bombs."

As Frost said, "There's a whole half of your lives that can't be made a science of—can't ever be made a science of." One of the greatest statisticians of our generation, Professor E. B. Wilson of Harvard, said once, "If your statistics disagree with your common sense, forget your statistics." Our universities are full of "behavioral scientists" struggling to make a science of human relations. Yet a large segment of human relations can never be "made a science of," and we are forced to rely on "common sense."

I once knew a physicist who had recently started to do research in biology. He said to me, "I don't see how you biologists ever find out anything. I can't control a thing." It is true that the biological sciences are far more complex than the physical sciences. It is equally true that the behavioral sciences are infinitely more complex than the biological. It is little wonder, then, that we have made greater advances in the physical sciences than in the biological, and the smallest advances in the behavioral areas. From the standpoint of time, the physical sciences are the oldest, the biological are fairly new, and the behavioral in their mere infancy.

"FACTS" ARE FREQUENTLY DECEPTIVE

"The wish is father of the thought." All of us would like human relations to be based on scientific findings. Foundations will give money for almost any "scientific" project that gives promise of shedding light on human behavior.

In an attempt to be scientific, some behavioral scientists love to talk about "facts." What is a fact? A young professor once quoted to me a declaration by a Scottish poet to the effect that "a fact is a fact." I could not help remarking at the naivete of such a statement. There is nothing so elusive, so difficult to establish and to understand in its totality and implications as a "fact." Peter Drucker, in his excellent book LANDMARKS OF TOMORROW, says, "In the traditional concept, the aim of the systematic search for knowledge was new facts *(whatever this slippery, metaphysical term might*



Norman B. Nelson, M.D., Dean

mean!)." In an attempt to be scientific, many behavioral scientists have become enamored with statistics. They will figure out correlation coefficients, standard devisions and chi squares at the drop of a hat, and on all types of dubious "factual" material, under the impression that these make their investigations scientific.

Wilson tells of a study of the causes of insanity once started in Massachusetts. The basic thought was that perhaps a severe stress or strain might be a factor in the etiology of insanity. With the thought that the loss of a wife constituted stress, the investigators compared the incidence of insanity in widowers with the incidence in single men, and sure enough, they found it to be much higher. This was so significant statistically that it could not have been expected to happen by chance oftener than once in several million times. A more sophisticated person, however, said, "Let us see if this holds true for every age group." When divided into age groups, the incidence of insanity was markedly *higher in single men* than in widowers *for every age group.* Yet, when added up, the total incidence was higher in the widowers. Students, when I tell them this, frequently say that it is impossible. I then give them the hypothetical figures below, to illustrate my point:

	Single Men		*Widowers*	
Age Groups	TOTAL POPULATION	INSANE	TOTAL POPULATION	INSANE
20-40	1,000	20	100	1
40-60	500	20	500	10
60 and over	100	30	1,000	150
Totals ..	1,600	60	1,600	161

One may note that 20 out of 1,000 is twice one out of 100; 20 out of 500 is twice 10 out of 500; and 30 out of 100 is twice 150 out of 1,000. Yet, 60 out of 1,600 is less than half as much as 161 out of 1,600.

If it seems that I am saying that because it is difficult, we should not attempt to study human behavior scientifically, I want to disabuse you. Many wonderful scientists are devoting their lives to the study of various areas of human behavior, and no doubt will add light. But the journey is difficult and fraught with dangers. It is the naive who grab onto almost any "finding" or statement and chart their course accordingly. The truly scientific behavioral scientists are the first to realize and point out the weaknesses and possible pitfalls. The unsophisticated tend to "grab the ball and run with it."

They love generalizations of all sorts, especially the generalizations that agree with their own prejudices. Oliver Wendell Holmes once said, "Generalizations are all false, including this one." Our whole "progressive" educational approach has used Freud's philosophy that "frustration produces conflict; conflict is the basis of neurosis" (not his exact words) to decry anything that would frustrate a child. The advocates of progressive education forgot that Freud also stated that "the successful resolution of conflict leads to maturity." We are now completing the circle, and psychiatrists today are telling us that discipline is necessary for the "security" of the child.

RESEARCH IN HUMAN BEHAVIOR MUST CONTINUE

Stated crudely, Gibbs' phase rule—a product of "pure" research that has had tremendous monetary value to the chemical industry—is that in any mixture of solids, gases and liquids, one cannot change a single component without altering *all.* It seems that we could use a Gibbs' phase rule concept in the study and interpretation of human relations. We could well assume that it is impossible to alter a single phase of human relations without altering all phases—some drastically. Sweden has eliminated the slums and developed social security to its maximum. Yet it has coincidentally had an increase in juvenile delinquency, alcoholism and suicide. No one seems to know why.

Dr. Allan Watt, in his intriguing book THE WISDOM OF INSECURITY, tells of a childhood desire of his to "send someone a parcel of water in the mail. But the game would never work, since it is irritatingly impossible to wrap and tie a pound of water in a paper package." He goes on to say, "The more one studies attempted solutions to problems in politics and economics, in art, philosophy and religion [he could have included all of the behavioral areas], the more one has the impression of extremely gifted people wearing out their ingenuity at the impossible and futile task of trying to get the water of life into neat and permanent packages."

Walt Whitman, in his LEAVES OF GRASS, has stated, "It is inherent in success, no matter what, that a greater struggle becomes necessary." The truth of this striking (although disconcerting) statement becomes more apparent the more one thinks of it. Research in technology has solved many problems, but it has introduced many more. We succeeded in perfecting the automobile, and now we can't figure out how to stop the killings on the highway. We succeeded in increasing agricultural productivity, and now can't figure out what to do with the "surplus." Little did we realize that when we made "success" our god, we created a sort of monster.

Research in the behavioral sciences will undoubtedly add light, but it will also add more problems. If we ever succeed, in the behavioral areas, in separating "that which can be made a science of" (Robert Frost), we will still have a "whole half of our life which cannot be made a science of—cannot ever be made a science of." I cannot see how life in this world of ours can help continuing to become more complex.

In Memoriam

ARTHUR STEINDLER, M.D.

"Certainly, no justice can be done to the case by adopting a partisan standpoint. All opinions are needed and must be heard and explained."

"There are practically no clinical data which can be waved aside as insignificant; any one may prove to be a valuable landmark for diagnosis."

"There will always be those who are anxious to find a short cut to results and in their hurry pass by the stations of diagnosis and indications, making specific operative techniques their first stop. No doubt they will be disappointed."

—Arthur Steindler

The people of Iowa, the doctors, and particularly the orthopedic surgeons will not soon forget the work of such a kindly scholar as Dr. Arthur Steindler, who brought honor to his profession, to the S.U.I. College of Medicine and to Iowa throughout 35 years.

On November 1, 1959, Dr. Steindler's library was moved to the Children's Hospital, and is housed in the room which served as his office from 1915 to 1949. Outside the window, a magnolia and forsythia stand, eager to announce another spring as they have been ever since 1925, when Dr. Steindler gave them their start. Inside, on his desk, a guest book stands open to welcome any visitor who wishes to respond to sentiment or nostalgia by browsing among the many contents of the room. To refresh old memories, or to see Dr. Steindler for the first time, I invite you to join me in the Steindler Library. The books, the work files, the diplomas—earned or honorary—the pictures of contemporaries, and the various other items each bespeak the man that he was.

One might suspect that The Hand held special significance for Dr. Steindler. That is suggested in several unconnected ways throughout the room. The eye-catcher in his portrait which dominates the room is The Hand. In a glass case holding his academic robes, a replica of his own hands in bronze captures attention, and a framed account entitled "The Hand" is prominently displayed on a special shelf among his other prized objects. The framed account, written in 1833 by Sir Charles Bell, gives a possible clue to the significance of "The Hand": ". . . so we rather say with Galen—that man had hands given to him because he was the wisest creature, than ascribe his superiority and knowledge to the use of his hands."

A self-appointed task of accomplishment is evidenced all about. Eleven books over a period of 35 years were written by Dr. Steindler at the desk on exhibit here. The work notes that fill every cabinet reveal the endless hours he devoted to the accumulation of their contents. Eighty-five neatly labeled and corrected manuscripts of unpublished talks unfold the varied interests of Dr. Steindler: "Greek Thought in Medicine," "A Report of a Rotary International Meeting in Switzerland," "Crippledom," "National Defense," "What Price Democracy?" and "Reports on Visits to Station Hospitals." These are a few of the subjects that engaged his interest outside of orthopedic circles and took him to Europe, South America and Mexico, as well as to the important orthopedic centers of our country.

A random survey of the 950 books and 16 sets of bound volumes identifies certain characteristics of Dr. Steindler. The arrangement of the books by subject matter indicates a planned thorough and depth-perception approach, especially in more remote subject matter such as the 27 volumes on body motions. Frayed pages, underlinings and marginal marks stand as silent evidence of the hours he spent by lamplight reading and rereading these tomes. The German, French and Italian works show similar usage. The orderliness and the cataloging of the entire library pinpoint each bit of information, and it is easy to see how hours spent in this library could only reinforce an already encyclopedic mind in the field of orthopedic surgery.



Dr. Arthur Steindler

The Steindler Library marks a cross roads in orthopedic surgery, for in it one can see both the past and the future. The past was an exploitation of clinical and surgical technics; the future will deal with more basic issues. Dr. Steindler bridged these periods by participating in the former and predicting the latter. In 1933, during his presidential address to the American Association of Orthopedic Surgeons, he stressed the need for more basic research in orthopedic surgery, and he lived to aid in the establishment of an Orthopedic Research Society (1954).

I should like to end by quoting two aphorisms of Osler's:

"Through your students and your disciples will come your greatest honor."

"Live a simple and temperate life that you may give all your powers to your profession."

—CARROLL B. LARSON, M.D.

JOHN H. RANDALL, M.D.

It is appropriate at this time to pay tribute to John Hammond Randall, who died at Iowa City on April 19, 1959. Dr. Randall was born on February 26, 1899, at West Milton, Ohio. He received his premedical training at Defiance College, in Defiance, Ohio, and his M.D. degree from the State University of Iowa in 1928. After a year's internship at his *alma mater,* he decided upon a career in obstetrics and gynecology. This training, he completed at the University Hospitals in 1934. In 1930, he and his wife spent a year touring the important European clinics. Dr. Randall was particularly impressed with the gynecological surgery and pathology he observed in Vienna, Austria, and this played an important role in his future development. Upon his return, he devoted his life to academic medicine in Iowa.

From 1934 to 1952, he matured as a teacher and developed a keen insight into the management of genital malignancies and fistulas. Upon the retirement of Dr. E. D. Plass, he became head of the Department of Obstetrics and Gynecology at the State University of Iowa Hospitals. Under his guidance, the Department continued its progressive expansion.

The story of Dr. John H. Randall is dominated by his diligence, his faithfulness and his keen interest in patients, students and residents. He was a great teacher, being able to present the important clinical features of a disease process clearly and concisely. He was highly respected by his students and staff, influencing many of them to become interested in obstetrics and gynecology. On several occasions he was honored by the students for his interest and teaching ability. He was an excellent surgeon, and an expert gynecologic pathologist. The physicians of Iowa relied heavily upon him for advice and counsel.

Although his main interests were along clinical lines, he recognized the importance of research and encouraged investigative endeavors. He contributed many excellent articles to the obstetrical and gynecological literature.

"Uncle John" or "Big John," as he was affectionately known by his residents and staff, was a great man. His contributions to Iowa medicine will be felt for many years hence. So, on behalf of his friends, colleagues, students and patients, we give this accolade to the memory of John Hammond Randall, truly a great humanitarian and humble physician.

—W. C. KEETTEL, M.D.

ROBERT BANKS GIBSON, PH.D.

Dr. Robert Banks Gibson was born in Uncompahgre, Colorado, on March 8, 1882, the son of Major Robert Jackson Gibson and Ella Banks Gibson. He was the eldest of seven children, having five brothers and one sister.

His boyhood was spent at various Army posts, where his father, Dr. Robert J. Gibson, served as surgeon. He graduated from the New Haven, Connecticut, high school in 1896, and from Yale University in 1902 with a Ph.B. In 1906, he received the Ph.D. degree from Yale. As a graduate student, he studied under the famous biochemist,

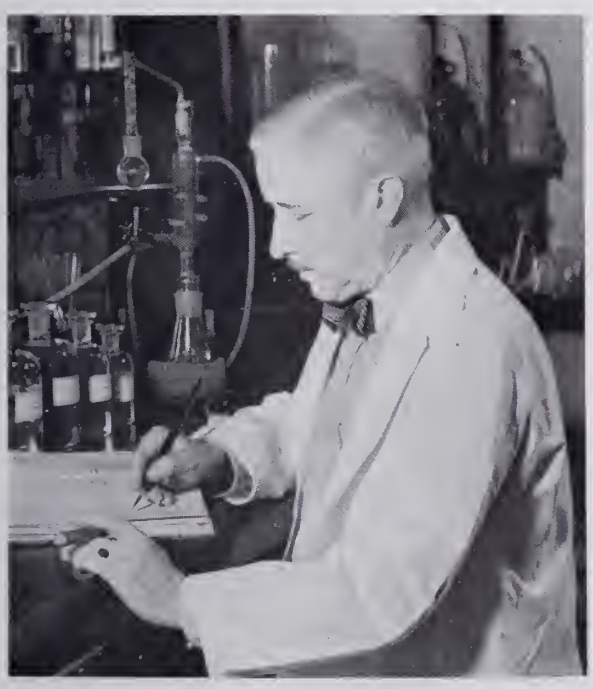


Dr. John H. Randall

Lafayette B. Mendel. Dr. Gibson was a graduate assistant at the Sheffield Science School, at Yale, from 1903 to 1904. From 1904 until 1907, he served as a bacteriologist at the Department of Health in New York City, where he was the first investigator to remove inert protein from diphtheria antitoxin, thus facilitating its administration with safety in small doses. In 1907, he joined the staff of the University of Missouri as an instructor and later became a professor of physiological chemistry and pharmacology. From 1911 to 1912, he was associated with the Department of Biochemistry at the University of Minnesota.

Dr. Gibson learned about an opening at the new hospital in Manila when his father was stationed in the Philippines, and he accepted the headship of the Department of Biochemistry there in 1912. His research investigations included a study of beri-beri and other diseases of nutrition. He was among the first to describe the muscle changes in beri-beri as distinct from those in muscular dystrophy.

In 1917, while on a furlough in the States, Dr. Gibson was introduced to Lucy Tate by a mutual friend, and after a month's courtship they were married and returned to his post in the Philippines. At the conclusion of eight successful years in Manila, he yielded to his wife's wishes to go back to the States to live. He then joined the staff at the State University of Iowa as an assistant professor of internal medicine. In 1928, he was appointed associate professor of biochemistry and director of the Pathological Chemistry Laboratory. In 1950, he was made a full professor.



Dr. Robert B. Gibson

Dr. Gibson's research activities at Iowa embraced many areas of chemistry and medicine. He was among the first of the early investigators in the United States to employ insulin in the treatment of diabetes. He developed a micro fingertip method for blood sugar determinations, and correlated the diet and dosage of insulin for proper diabetic management. Dr. Gibson was among the first to describe the syndrome of hyperinsulinism.

Later in his nutritional research, he was the first to describe the efficacy of whole liver in the treatment of pernicious anemia. This preceded the work of Minot and Murphy, who developed the use of liver extract in the treatment of this disease. He conducted considerable research on bile pigments and bile acids. He developed procedures for the isolation of bilirubin, and devised a quantitative method for its determination in blood. His retiring personality prevented the exploitation of many of his early discoveries.

Dr. Gibson was never satisfied with existing methods in clinical chemistry. He and his students continually revised technics to improve their accuracy, to allow the use of less specimen and to shorten the test period. He was truly a pioneer clinical chemist, and for years, along with Meyer Bodansky, was the only chemist who saw patients and actually correlated laboratory results with clinical findings. One of the most outstanding achievements in Dr. Gibson's academic career was the training of more clinical chemists in his laboratory than were trained in any other laboratory in the country.

Mrs. Gibson died in January, 1951, having never fully recovered from an automobile accident that had occurred a few years earlier. In July, 1952, Dr. Gibson married Wilhelmine Ronistal, who had come to this country from Latvia in 1950.

Dr. Gibson was a very kind and thoughtful man, and was held in high esteem by his many friends. His personality and reputation in clinical chemistry attracted many graduate students to his laboratory in the University Hospitals. In 1952, he was awarded a citation from the American Association of Clinical Chemists for his efforts in the training of clinical chemists.

Following his retirement, he and his wife spent most of their time in Miami. He died on May 26, 1959, in Iowa City, and is buried in Miami Memorial Park, in southwest Miami.

—J. I. ROUTH, Ph.D., and
W. D. PAUL, M.D.

New Department Heads

Dr. William C. Keettel assumed his duties as professor and head of the Department of Obstetrics and Gynecology at the S.U.I. College of Medicine on November 1, 1959, succeeding Dr. John Randall, who died on April 19, 1959, after serving as head of the Department for seven years.

Born at Lyons, Nebraska, in 1911, Dr. Keettel received his bachelor of science degree from the University of Nebraska in 1932, and his doctor of medicine degree four years later. Following a rotating internship at the University of Indiana and a residency in obstetrics and gynecology at the State University of Iowa, he was appointed obstetric consultant to the Wisconsin State Department of Health through the University of Wisconsin, at Madison, in 1940. He remained in that position until called to active duty in the military service in 1943. While in uniform, he served as physician in charge of obstetrics and gynecology at the Manhattan District Project, Army Medical Group, Oak Ridge, Tennessee. Upon completion of his military service, he returned to S.U.I. to take an appointment as an assistant professor of obstetrics and gynecology, in 1946. He was appointed associate professor in 1949, and served in that capacity until last fall. He was certified by the American Board of Obstetrics and Gynecology in 1942.

He has authored or co-authored 34 or more articles pertaining to obstetrical and gynecological problems in major journals.

On July 1, 1959, Dr. Wallace W. McCrory assumed his duties as professor and head of the Department of Pediatrics at the S.U.I. College of Medicine, succeeding Dr. Charles D. May, who resigned on August 15, 1957, after five years as head of the Department.

He was born in Racine, Wisconsin, in 1920, and he received his doctor of medicine degree from the University of Wisconsin in 1944. Following an internship at Philadelphia General Hospital and a year's residency in pediatrics at Children's Hospital, Philadelphia, he entered military service, serving as chief pediatrician at Walter Reed General Hospital (1946 and 1947), and chief pediatrician at Fort Bragg Station Hospital (1947 and 1948). Upon completion of his military duty in 1948, he returned to the University of Pennsylvania School of Medicine and Children's Hospital, in Philadelphia. There, he served as associate physician, and later as senior physician and associate director of the Clinical Chemistry Laboratory at Children's Hospital. His teaching appointments in the Department of Pediatrics of the University of Pennsylvania School of Medicine consisted of assistant instructor (1948-1951), instructor (1951-1953), assistant professor (1953-1955), and associate professor (1955). He is certified by the American Board of Pediatrics.

Dr. McCrory's main research interests are in pediatric renal disease and renal function.



Dr. Keettel



Dr. McCrory

Scientific Articles

Recent Advances in Knowledge Of

The Etiology of Essential Hypertension

WILLIAM R. WILSON, M.D.

IOWA CITY

ALTHOUGH ARTERIAL pressure was first measured about 250 years ago by Stephen Hales, the accurate clinical recording of blood pressure in human beings has been routine for only a little more than half a century. The pathogenesis of essential hypertension is still unknown, despite extensive research during the past 25 years. Previously, the main causes of essential hypertension have been thought to be disturbances of the endocrine glands, the kidneys or the brain. Humoral pressor agents have been incriminated. Heredity and body type may play roles in some instances, but research has not revealed the mechanisms by which these factors operate. Pickering believes that patients with essential hypertension merely are those persons having blood pressures above a certain arbitrarily defined value, and that if one excludes patients with secondary hypertension, no evidence exists that high pressure is qualitatively different from normal arterial pressure.[1] The purpose of this paper is to describe and discuss some of the recent advances in the knowledge of the causes of essential hypertension.

RENAL FACTORS

In 1898 renin, a renal enzyme, was discovered by Tigerstedt and Bergman.[2] Forty years later Page and Helmer,[3] and Braun-Menéndez and his co-workers[4] reported that the pressor activity of this substance resulted from a chemical reaction that produces a polypeptide with powerful vasoconstrictor properties. In this process renin, which is formed in normal and hypertensive kidneys, enters the blood stream and reacts there with a protein substrate synthesized by the liver. This reaction splits a decapeptide from the protein substrate. Then a converting enzyme in the blood splits histadyl-leucine, and the resulting octapeptide is the vasoactor agent.[5] The structure of this potent vasoconstrictor (angiotensin) is now known,[6] and recently it was synthesized by Schwarz, Bumpus and Page,[7] and by Rittel and co-workers.[8]

Failure to find increased renin concentration in the plasma of hypertensive patients has often been used as an argument against the renal-renin theory. In 1952, Kahn and co-workers,[9] using a technic employing 250 ml. of blood per determination, found an increase in the angiotensin content of the blood in patients with essential hypertension. Blood loss itself, however, can cause the liberation of renin.[10] New methods for the reliable determination of angiotensin levels in small quantities of blood must be developed before we can learn the role of angiotensin in initiating and perpetuating human hypertension. Synthesis of inhibitors of this vasoconstrictor is now another possible approach to the problem.[11] If strict criteria for the demonstration of renin or angiotensin in a biologic fluid had been followed by all workers assaying these substances, the present conflicting and confusing situation might not have arisen.[12]

Judson and Helmer have catheterized the renal veins of patients with various forms of hypertension and studied the constrictor activity of the plasma on spirally-cut strips of rabbit aorta.[13] Plasma from patients with malignant hypertension caused a strong contraction. In two patients under antihypertensive therapy, a decrease in constrictor activity of renal vein plasma was found. In patients with chronic hypertensive disease, less constrictor activity was found. The response obtained on the

Dr. Wilson is on the staff of the Cardiovascular Research Laboratories and is an Assistant Professor in the Department of Internal Medicine at the S.U.I. College of Medicine.

aortic strip was similar to that seen with angiotensin.

Renotrophin is a substance which Braun-Menéndez believes is important in the pathogenesis of experimental renal and other forms of hypertension.[14] He believes the production of this material is stimulated by a high-protein diet, male sex hormones, thyroid and certain anterior pituitary hormones. Hypertension results when the renotrophin concentration of the plasma is increased and renal tissue is decreased or kept from hypertrophying.

ADRENAL FACTORS

Adrenal cortical adenomas and pheochromocytomas cause only a few cases of hypertension and appear to have little relation to essential hypertension. Palmer still believes that norepinephrine may be the culprit in essential hypertension.[15] Selye has postulated, in his well-known alarm reaction, that hypertension may be secondary to increased and questionably deranged adrenocortical secretion in response to stress.[16] Genest, Koiw, Nowaczynski and Sandor have studied various adrenocortical hormones in the urine of normal subjects and hypertensive patients.[17] They found a statistically significant increase in mean urinary aldosterone excretion, and an equally significant decrease in mean urinary pregnanetriol excretion in patients with essential, renal and malignant hypertension as compared to normals. Genest *et al.* believe a reduced ratio of urinary pregnanetriol to aldosterone is highly suggestive of hypertensive disease if other obvious endocrine disorders are not present. They found no significant difference in other adrenal hormones, cortisone, hydrocortisone and their derivatives, between normal and hypertensive subjects. Intact adrenals appear necessary in most animals in order to produce or maintain experimental hypertension by renal ischemia, but Knowlton and co-workers have produced hypertension in animals even after adrenalectomy.[18] Furthermore, marked hypertension has persisted in some patients even after bilateral adrenalectomy.

Although many, including Selye[19] and Heinbecker,[20] have suggested that the adrenal cortex or the hypothalamic-pituitary axis may play key roles in the genesis of hypertension, Gaunt and co-workers recently emphasized that convincing evidence is still wanting, except in relatively rare instances of adrenal hyperplasia or tumors.[21]

HEPATIC FACTORS

No histologic evidence of liver pathology has been found in patients with essential hypertension. Blood levels of transaminase and aldose are normal.[22]

In 1950, Shorr and Zweifach reported that the livers of patients with essential hypertension contain unusual amounts of ferritin.[23] Previous studies by these investigators had shown that the vasodepressor activity of V.D.M., a vasoinhibitor made in the liver, was related to ferritin. Normally, ferritin is stored in the liver in a biologically inert disulfide form. Under stress, ferritin is reduced to its free SH form, and free iron is liberated.[22] This release of iron may be responsible for the vasoinhibition.[24] However, studies in which ferritin was given intravenously to animals with experimental hypertension have not shown any lowering of blood pressure.[22]

At present, the exact relationship of ferritin and iron to the factors causing altered vascular tone and hypertension is unknown. Further investigation is needed to establish the role of the ferritin system.

RELATIONSHIP OF TRACE METALS TO HYPERTENSION

Except for the ganglionic blockers, most of the antihypertensive drugs bind metals, at least *in vitro*.[25] Hydralazine is a good example. It binds iron, copper, tin, vanadium, silver, nickel, manganese or mercury.[26] Certain metals act on blood vessels. Magnesium, in the form of magnesium sulfate, has been used in the treatment of certain types of hypertension. Cobalt is known to be a vasodilator.[27]

Vanadium (sodium vanadate) may be a peripheral vasoconstrictor.[28] Jacques and co-workers recently reported that copper sulfate constricts the coronary vessels of the isolated rabbit heart, and that hydralazine abolishes that effect.[29]

Perry, Schroeder and Frederickson have found that some cations are present in excess in the urine of hypertensive patients.[30] One of these is cadmium, which is not present in babies' urine or tissue, but its content in kidney tissue increases with age.[31]

Although some common trace metals have an action on blood vessels, investigations up to this time have not identified a few metals which might provide answers to the problem of the etiology of essential hypertension.

ENZYMES

Monamine Oxidase. Over 20 years ago, Holtz, Credner and Walter suggested that the pathogenesis of hypertension might be related to an enzymatic disturbance, after showing that renal decarboxylation of certain amino acids produced an excessive amount of vasoactive primary amines, if monamine oxidase activity were simultaneously depressed.[32] In 1937, Kohn reported that the *in vitro* relationship of monamine oxidase to oxygen tension was linear—i.e., a 50 per cent reduction in oxygen tension resulted in halving its activity.[33]

This oxidase reacts specifically with the terminal NH_2 of 15 primary amines (e.g., norepinephrine, serotonin) to oxidize the amine side chains to aldehydes, with the liberation of ammonia. Most primary amines are vasoactive.[34] No direct evidence exists that the tissue content of monamine

oxidase is reduced in patients with hypertension.

In animals with experimental renal hypertension, intravenous monamine oxidase reduced blood pressure, although no chronic changes were seen when the enzyme was given orally in large quantities to animals or human beings.[34] Elevated primary amine levels have been found in arterial blood and in renal venous blood, but not in the brachial venous blood of patients with hypertension.[35, 36] Qualitative differences in primary amine excretion in urines of hypertensive patients as compared to normal subjects have also been reported.[37]

Schroeder believes these amines may produce some of the tension, anxiety and nervousness as well as the abnormal electroencephalograms seen in hypertensive patients. He does not feel, however, that they are primarily responsible for the elevation of blood pressure.[34] Monamine oxidase inhibitors do not produce hypertension, although theoretically they would, if changes in the enzyme were casually related to high blood pressure.

The changes in amine levels in the blood and urine of hypertensive patients may result from a local partial inhibition of monamine oxidase in either the kidneys or lungs.[34]

O-Methyl Transferase. In 1958, Axelrod *et al.* reported that O-methylation is the principal pathway for the metabolism of epinephrine and norepinephrine.[38] In 1959, Axelrod and Laroche demonstrated that O-methyl transferase is the enzyme mainly involved in norepinephrine inactivation.[39] They also showed that monamine oxidase is concerned primarily with deamination of the O-methylated metabolites of epinephrine and norepinephrine, rather than the catechol amines directly. Treatment with iproniazid, a monamine oxidase inhibitor, did not affect the rate of metabolism of epinephrine in mice.[39] There is no direct evidence that the content of O-methyl transferase in the arterial walls of patients with essential hypertension is actually decreased. Mendlowitz and associates have reported that reactivity to norepinephrine in the digital circulation was doubled or trebled after the administration of prednisone in most normal subjects, but remained practically unchanged in hypertensive patients.[40] The authors believe that these findings support the hypothesis that prednisone inhibits the enzyme which inactivates norepinephrine, and that patients with essential hypertension may have a deficiency of this enzyme. Further chemical studies will be necessary to determine whether O-methyl transferase is the deficient enzyme in primary hypertension.

SALT

The well known effects of salt restriction on the blood pressure levels in some hypertensive patients have suggested a basic disturbance in water and electrolyte metabolism. The rice-fruit diet is effective in treating some patients with hypertension because of its very low sodium content.[41] The hypothesis has been offered that the low-sodium diet exerts its beneficial effect in hypertensive patients by causing an increase in cellular hydration.[42] Slight elevations of serum sodium concentration,[43] expanded total body sodium,[44] and an increase in sodium and water content of the arterial wall[45] have been described in patients with high blood pressure. Dahl, Stall and Cotzias studied 11 patients with essential hypertension before and after restriction of sodium intake to approximately 6 mEq. per day.[46] They reported no correlation between changes in blood pressure and either total exchangeable sodium or potassium. On the basis of rat experiments, the theory has been advanced that the hypertensive animal or patient keeps a relatively hypertonic internal environment by excreting in the urine proportionately more water than sodium.[47] In contrast, similar renal clearance studies in response to salt loading in human beings have not shown that water excretion in excess of sodium excretion causes a relative retention of sodium in most hypertensive subjects.[48] Some of the reported differences in water and electrolyte metabolism between hypertensive and normotensive subjects may be due to secondary renal and cardiac disturbances, rather than to the hypertensive process itself.[49]

The question of whether these changes in water and electrolyte metabolism are cause or effect of high blood pressure in essential hypertension remains unanswered.

STRESS

Although psychologic disturbances have been postulated as initiating factors, there is little scientific evidence to indicate that psychic alterations are the prime cause of hypertension. Palmer has characterized high blood pressure as a "chronic emergency response in congenitally susceptible individuals due to the strain of adjustment to the environment."[15] Some of the symptoms associated with essential hypertension may be of psychic origin, and transient elevations of blood pressure have been recorded in combat following repeated exposures to strong emotional experiences of fear, anxiety and hostility.

Apparently, hypertension had never been produced in animals subjected to stress until the Russians recently scored another "first."[50] Housed together in the same cage for a suitable control period, were three male monkeys and one female monkey. Two of the males were then placed in a separate cage adjacent to the one occupied by the remaining pair. The blood pressure of the frustrated males rose considerably and remained elevated during the entire experimental period of about one year. What happened to the blood pressures after the stress was removed presumably has not been reported.

CONCLUSIONS

Despite recent advances in knowledge of the roles of renal, hepatic, adrenal and other factors, the pathogenesis of essential hypertension is still unknown. The relationship of trace metals and the possibility of a hereditary defect in O-methyl transferase or some other enzyme need added clarification. The question of whether there is a basic pathogenic change in body electrolytes, proteins or enzymes, or in other metabolic activities of smooth muscle of blood vessels provides an adequate stimulus and material for future study.

The author is indebted to Drs. Walter Kirkendall and William B. Bean for critical review of this paper.

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A Profile Of

The Drug Therapy of Hypertension

MARK L. ARMSTRONG, M.D.

IOWA CITY

HIGH BLOOD PRESSURE is seen daily in clinical practice. Within the past decade, it has become possible to reduce blood pressure, almost without exception, by means of a series of new therapeutic agents. Scores of drugs have been introduced singly or in combination with one another. This vast array may be divided into only a few classes of agents. Each class attacks pressor mechanisms in a different way.

These classes are of varying potencies, and thus a spectrum of classes of agents may be depicted in terms of antihypertensive effect (Table 1). The descriptions which follow are a résumé of personal experience and information from various sources that should be consulted for further details.[1-3] The agents in common use, listed by generic and proprietary names, can be found in Table 2, together with the average oral maintenance dose of each.

RAUWOLFIA COMPOUNDS

Rauwolfia serpentina Benth. is a climbing shrub found in India and neighboring countries. The powdered root has been employed empirically in those lands for centuries as a remedy for many disorders, including mental illness. This folk drug has been the subject of serious clinical scrutiny since the isolation of a number of its active alkaloids in 1931, and the subsequent demonstration of their effects upon the cardiovascular system.

The cardiovascular effects consist of reduction

TABLE 1

RELATIVE POTENCY OF ANTIHYPERTENSIVE DRUGS

Agents With a Mildly Depressor Action
1. rauwolfia drugs (given orally)
2. chlorothiazide congeners (as sole agent)
3. hydralazine (given orally)

Agents With a Moderately Depressor Action
1. veratrum derivatives (given orally)
2. the combination of rauwolfia drugs and chlorothiazide congeners

Agents With a Markedly Depressor Action
1. blockers of autonomic ganglia
2. blockers of adrenergic nerves
3. the combination of hydralazine and chlorothiazide congeners
4. rauwolfia (reserpine)
5. veratrum derivatives
6. hydralazine

} parenterally administered

TABLE 2

THE COMMON ANTIHYPERTENSIVE DRUGS

Name of Agent	*Trade Names*	*Average Daily Oral Dose*
Rauwolfia Class		
whole root extract	Raudixin®	200 mg.
alseroxylon alkaloids	Rauwiloid®, Rautensin®	4 mg.
rescinnamine	Moderil®	0.5 mg.
deserpidine	Harmonyl®	0.5 mg.
reserpine	Serpasil®, Reserpoid®	0.5 mg.
syrosingopine	Singoserp®	2 mg.
Thiazide Class		
chlorothiazide	Diuril®	1 Gm.
flumethiazide	Ademol	1 Gm.
hydrochlorothiazide	Esidrix®, HydroDIURIL	100 mg.
hydroflumethiazide	Saluron	100 mg.
benzydroflumethiazide	Naturetin	10 mg.
Veratrum Class		
alkavervir alkaloids	Veriloid®	50 mg.
protoveratrine A & B	Provell®, Veralba	10 mg.
protoveratrine A	Protalba	4 mg.
cryptenamine	Unitensin®	20 mg.
Hydralazine		
hydralazine	Apresoline®	100 mg.
Autonomic Ganglionic Blockers		
pentolinium	Ansolysen®	300 mg.
chlorisondamine	Ecolid®	250 mg.
trimethidinium	Ostensin®	300 mg.
mecamylamine	Inversine®	35 mg.
Adrenergic Blockers		
bretylium	Darenthin	800 mg.
guanethidine	Ismelin	40 mg.

In all cases except rauwolfia and thiazide drugs the initial dose is smaller than the maintenance dose and increments are then added until the optimal dose is achieved for a given patient.

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in blood pressure and a slowing of the heart rate. The bradycardia is prevented by atropine, but not the hypotension. The pressor response to epinephrine is variably exaggerated. Reflexes such as the carotid sinus baroreceptor reflex are blocked. The rauwolfia alkaloids act centrally by stimulating hypothalamic centers. Parasympathomimetic action is evidenced by the decreased heart rate and increased gastrointestinal activity, and sympathetic inhibition is observed in the vasodilation in the nares and in the reduction of arterial pressure.

In experimental animals, large doses of rauwolfia derivatives flush pressor amines, notably norepinephrine, from multiple "storage" sites in the viscera, arterial walls and brain. This important observation may well have a significant relation to the manner in which small doses of rauwolfia act on the human cardiovascular system, but such a relation remains obscure at present. In man, when the drug is given orally, the cardiovascular actions do not become apparent until after three or more days of therapy, and do not become maximal for two or more weeks. When rauwolfia is withdrawn, the hypotension and bradycardia may persist for several weeks. The delayed onset and slow development of its cardiovascular actions suggest either that the drug may be converted to an active form in the body, or that its effect is a reflection of the depletion of vasoactive substances from body stores.

Ancillary central actions are noted in the tranquilizing effect, the tendency to lower body temperature and the increased appetite. The tranquilizing motif includes reduction in spontaneous activity in animals and sedation in man, but it does not cause generalized central depression. Massive doses induce a pseudo-Parkinsonian state in a small percentage of patients. Miosis without loss of the pupillary light reflex is frequently prominent.

The symptoms noted during administration of rauwolfia drugs usually are not marked. Nasal congestion, an undesirable increase in appetite and loose stools are most frequently observed. These symptoms may occur within hours, in contrast to the long latency of the onset of cardiovascular effects. Lassitude, drowsiness and other evidence of central sedation are seldom seen except after large doses. Nervousness and nightmares occur in some individuals. Respiratory depression is noted only when the drug is administered parenterally. Rarely, pruritus and urticaria have been observed. Gastric secretion may be increased, and for this reason, rauwolfia must be used with caution in patients with peptic ulcer.

By far the most serious effect occurs in those patients whose mood is altered to frank depression. Immediate withdrawal of the drug is mandatory in such individuals, since suicide is a real hazard. Recovery from drug-induced depression occurs slowly, and psychiatric observation may be necessary during the weeks or months that intervene before recovery.

The patient and his relatives should be told at the outset of treatment that depression may occur. Should potentially depressing crises occur in the patient's life, discontinuation of the drug for several weeks should be carefully considered.

A small percentage of patients treated with rauwolfia have severe hypotensive reactions to various anesthetics and preanesthetic medications.[4] In some instances, it has not been possible to restore blood pressure to adequate levels with vasopressor drugs, necessitating a postponement of surgery. Hence, it is preferable to withdraw the drug two or three weeks before elective surgery is to be performed.

Syrosingopine (Singoserp®), a synthetic reserpine analog, is said to cause fewer side effects than other rauwolfia compounds. However, several large clinics have found this difference insubstantial when equipotent doses were compared.

Reserpine is a drug of major potency when given intravenously or intramuscularly in doses of 2.5 to 5.0 mg. It may be used to great advantage in hypertensive crises. The maximal depressor effect occurs within four hours, in contrast to the marked delay in onset when it is administered by the oral route. Deep somnolence and quite striking bradycardia are noted after large parenteral doses.

THIAZIDE DRUGS

Diuril®, Ademol and derivative thiazide compounds are a new class of drugs of prime importance in the treatment of hypertension and edema.

The thiazide diuretics have a mild depressor action when used alone, and a marked potentiating action when used concomitantly with other antihypertensive drugs. (Oral and parenteral mercurial diuretics also potentiate the antihypertensive action of ganglionic blocking agents, and the potentiating effect of each mercurial is proportional to its natriuretic action.)

When 0.5 Gm. of chlorthiazide (Diuril®) is administered two or three times daily to the noncdematous patient, a fluid loss of up to four pounds can be expected within 72 hours. The effects of single doses do not last more than six hours. The drug must therefore be administered daily in divided doses without interruption, for adequate effect. The depressor effect may thus be maintained indefinitely by 0.5 Gm. two or three times daily. An unusually large intake of salt will nullify the effect of the drug on salt depletion and reverse the hypotensive action. The daily salt content of the diet need not be restricted below four or five grams, however.

Serum sodium levels are usually unchanged by thiazide drugs, but carbon dioxide combining power tends to increase, the chloride decreases reciprocally, and serum potassium levels may fall

significantly. An undesirable increase in nitrogen retention may occur in patients with preexisting azotemia.

Although decreases in serum potassium are extremely common during the first few weeks of therapy with thiazides, symptomatic potassium depletion seldom occurs except in three groups of patients: (1) those who are on salt-restricted diets; (2) those who have renal disease with cation-wasting features; (3) those who are receiving digitalis. *If digitalis is being taken, potassium depletion should be scrupulously avoided so as to prevent serious disturbances of cardiac rhythm.*

Hypochloremic alkalosis may be a problem occasionally. It can be corrected by the concurrent use of ammonium chloride or by increasing the salt content of the diet.

The untoward effects of thiazide therapy, aside from the biochemical disturbances noted, are gastrointestinal upsets and infrequent skin rashes. The gastrointestinal disturbances may be treated symptomatically. When rashes occur, another thiazide congener should be tried. Thrombocytopenic purpura is a rare consequence of therapy.

As the sole antihypertensive agent, thiazide drugs are effective in reducing the blood pressure in perhaps one-third of the cases with typical mild hypertension. The incidence of response rises sharply when the hypertensive disease is associated with (a) occult or manifest edema, as in hypertension following steroid administration,[5] or (b) previous sympathectomy. The latent effects of previous sympathectomy are potentiated, so that patients who have responded poorly or not at all to surgical treatment show marked reductions in standing blood pressures.

Thiazide drugs reduce the dosage requirement for ganglion-blocking agents by one-half in most patients. If the patient is already taking ganglionic-blocking drugs, the thiazide compound is added to the regimen with explicit instructions to reduce the dosage of the ganglionic-blocking agent promptly when blood pressure begins to fall. The response may appear within a few hours, but it is usually delayed for several days.

Numerous comparisons of the congeners of chlorothiazide (Diuril®) have been made. On a weight-for-weight basis, there may be a hundredfold difference among them in equipotent doses. The mechanism of action is almost certainly identical, however, and it remains to be established that any one of these agents is preferable because it causes less potassium loss.

VERATRUM DERIVATIVES

Veratrum alkaloids possess ideal antihypertensive properties. These advantages are unfortunately offset by the high incidence of undesirable effects, however, the chief of which is the emetic action.

The veratrum group induces widespread reflex vasodilatation, which includes the cerebral and renal arterioles. Blood flow to the brain and kidneys is therefore normal. Autonomic ganglia and adrenergically innervated vessel walls are not inactivated, and thus there is normal vasomotor lability. Cardiovascular reflexes (e.g., the cold pressor test, Valsalva maneuver) are not affected, and the usual responses to vasoactive and cardioactive drugs can still be obtained, except that marked tachycardia from pressor amines such as epinephrine does not occur.

Both the systolic and diastolic pressures fall in proportion to the dose of the drug. The depressor effect is purely reflex in nature and is independent of the decrease in heart rate. Doses in the therapeutic range do not cause venous pooling, and hence orthostatic hypotension is usually not observed. Venous tone may, on occasion, be increased. The heart rate slows to about 60 beats per minute.

Tetraethylammonium abolishes both the hypotension and the bradycardia by blocking ganglionic transmission in the efferent pathways of the reflex arcs concerned. Atropine, on the other hand, blocks the effect on heart rate, but not the effect on blood pressure. Since the arterioles retain responsiveness to constrictor influences, the hypotension caused by veratrum alkaloids can be terminated by the administration of sympathomimetic amines. On this basis, ephedrine or phenylephrine (Neo-Synephrine®) is employed to counteract an excessive fall in blood pressure encountered in the clinical use of these drugs.

The major symptoms from veratrum compounds are nausea, vomiting, epigastric and substernal burning, hiccough, salivation and sweating. These effects are usually more noticeable after oral than parenteral administration. Substernal distress may be mistaken for angina pectoris or, if associated with circulatory collapse, for myocardial infarction. Minor effects include circumoral numbness, tingling in the fingers and mouth, a feeling of warmth in the head, neck and shoulders, blurring of vision and mental confusion. Cardiac arrhythmias which develop will usually respond to atropine. They are more likely to occur in patients receiving both veratrum and digitalis.

Overdosage can cause profound hypotension and marked bradycardia. Sympathomimetic amines (other than epinephrine) and atropine should be given to correct these conditions.

The optimal dose must be determined for each patient over a period of many days. The initial dose is small, and daily increments are then added.

HYDRALAZINE

The only important pharmacologic effects of hydralazine (Apresoline®) are those influencing the cardiovascular system. Adequate doses in both

animals and man lower arterial blood pressure, increase heart rate and cardiac output, and decrease peripheral vascular resistance. The cardioactive effect is independent of the vasodepressor effect and usually precedes it.

The mechanism of the vasodepressor effect is diffuse. Centrally mediated cardiovascular reflexes such as the Valsalva "overshoot" are inconsistently blocked, but orthostatic hypotension is a frequent side effect. It is likely, however, that the small component of adrenergic blockade caused by the drug contributes little to the antihypertensive effect produced by therapeutic doses. Rather, the principal depressor action appears to be due to a direct nitrite-like influence on the muscle of the arterioles.

The incidence of unpleasant symptoms from hydralazine therapy is high. Headache, palpitation, nausea and vomiting are most often observed. Orthostatic hypotension is common. Paresthesias (extremities, circumoral area), edema (periorbital region, extremities, genitalia), dizziness, tremors and muscle cramps occur occasionally. Nasal congestion, flushing, lacrimation and conjunctivitis are noted from time to time. All of these symptoms tend to decrease after a few days or weeks of therapy.

Chronic administration of large doses of the drug causes an acute rheumatoid state similar to rheumatoid arthritis in approximately 10 per cent of cases. All signs and symptoms disappear in a few days if hydralazine is withdrawn. On the other hand, continuation of therapy results in a syndrome indistinguishable from disseminated lupus erythematosus. Fortunately, this picture is also reversible on discontinuation of therapy.

Hydralazine sometimes causes anginal attacks, with electrocardiographic manifestations of myocardial ischemia. Such episodes may not be related to either the vasodepressor and tachycrotic effects of the drug, or to exertion by the patient. In such instances they are due to excessive myocardial stimulation. Hence, hydralazine should be used with caution in persons with histories of coronary disease. It is of dubious value in older patients with tachycardia.

Hydralazine is a drug of moderate potency. Despite the high incidence of initial untoward reactions, it frequently is well tolerated in doses which provide an excellent antihypertensive effect.

GANGLIONIC BLOCKING AGENTS

Hexamethonium (Methium®, Bistrium®) was introduced 10 years ago. This drug inaugurated a new era in the treatment of severe hypertension. Since then, a succession of ganglionic blockers have appeared, all of which are better therapeutic agents than hexamethonium. They are all quartenary ammonium compounds, with the exception of mecamylamine (Inversine®), which is a secondary amine.

Ganglionic blocking agents have somewhat selective effects on various autonomic ganglia, a fact in keeping with the marked differences in origin, structure and functional organization of various ganglia. For example, the order of decreasing sensitivity to the blocking action of hexamethonium is as follows: parasympathetic salivary ganglia, sympathetic superior cervical ganglion, sympathetic vasomotor and parasympathetic intestinal ganglia and vagal cardiac ganglia.[6] It is likely that new therapeutic agents will be discovered with highly selective effects on a particular set of autonomic ganglia.

Symptomatically, however, diffuse blockade of the sympathetic and parasympathetic nervous systems is attained by all current ganglion-blocking drugs, as judged by the appearance of blurred vision, dry mouth, decreased perspiration, constipation, impotence and occasionally urinary retention (in cases of benign prostatic hypertrophy). At the same level of orthostatic hypotension, the differences among the blockers are not great. Chlorisondamine (Ecolid®) tends to cause more marked visual blurring, however, and trimethidinium (Ostensin®) may cause less constipation than other blockers.

All symptoms other than orthostatic dizziness are due to parasympatholytic blockade. The parasympatholytic effects can be partially counteracted by appropriate parasympathomimetic drugs. Thus, constipation may be alleviated by neostigmine, dry mouth and visual blurring may be improved to some extent by pilocarpine, and bladder retention may be counteracted by urecholine. Omission of one or two doses of the ganglionic blocker will usually cause a temporary release of drug-induced impotence. Orthostatic dizziness may be combatted by walking, or if marked, by sitting or lying. The effects of ganglionic blockade are increased by salt restriction, hot weather, vigorous exercise, drinking moderate amounts of alcohol, and particularly by the use of diuretics (as noted under the description of thiazide drugs).

Mecamylamine is unique in being almost completely absorbed from the gastrointestinal tract in a few hours. This excludes the problem of progressive intestinal obstruction that occurs in the wake of marked constipation. In spite of the relatively long duration of the blockade achieved and the feature of constant high absorption, however, the ordinary treatment problems encountered with mecamylamine are not dramatically less than those noted with other ganglionic blockers.

Heavy labor is poorly tolerated by patients receiving large doses of ganglion-blocking agents. Fatigue, dyspnea, dizziness and palpitation become major complaints. The limitation imposed on effort is due to diversion of the circulating blood to somatic muscle, in the face of partial inhibition of reflexes that increase cardiac output.

ADRENERGIC BLOCKERS

A group of agents now under clinical trial blocks sympathetic discharge without correspondingly blocking parasympathetic discharge. Among these agents are guanethidine (Ismelin) and bretylium (Darenthin). Like the autonomic ganglionic blockers, these agents have a notable effect on standing blood pressure and a very mild effect on recumbent blood pressure. Orthostatic dizziness and faintness are frequent side effects. The absence of parasympatholytic effects is an important advance, however.

These drugs block the formation or release of norepinephrine at sympathetic nerve endings. Diverse mechanisms may well be used to achieve the net result of adrenergic blockade (e.g. interference with pressor amine biosynthesis or release, depletion of pressor amines from storage sites and possibly binding of receptor substances).

Aside from symptoms of orthostatic hypotension, diarrhea and bradycardia are the principal significant side effects. Diarrhea has been mild in most cases, and frequently amounts to no more than a transient tendency toward loose stools.

Whether serious side effects will appear many months following the administration of such agents remains to be seen. At present, they appear to be a promising forward step in the treatment of severe hypertension.

THE THERAPEUTIC SETTING

The proper treatment of the hypertensive patient engages the matrix of skills, intuition and scientific knowledge that are found in clinical practice. An adequate regimen will often require adjuvant therapy, which is related to vasodepressor success indirectly at best. Furthermore, beyond the fact that potent drugs are available, the decision to treat a given patient rests on numerous critical factors which cannot be assessed outside the context of the individual case. Nevertheless, several generalizations regarding therapy may be made.[7]

1. A simple regimen is easier for a patient to adhere to than is a complex one. Although it is frequently necessary to use several drugs in a treatment program, the number should be held to a minimum, and dosage scheduled should be synchronized. All too often, patients become bewildered and discouraged because this has not been done.

2. Periodic review of the success of a patient's antihypertensive program should be carried out. Patients who are severely hypertensive require thorough appraisal at brief intervals. Since hospital and office blood pressures may be a poor indication of the arterial pressure in the patient's customary milieu, some clinics have instructed patients or their relatives in the technic of taking blood pressures in order to evaluate a patient's response to drugs in his daily environment. Such a maneuver may be particularly useful in evaluating severe hypertensives.

3. Treatment should be undertaken with caution in patients with renal insufficiency. Patients with moderate degrees of azotemia (blood urea nitrogen content less than 70 mg. per cent) will often respond well to careful management.

4. Cerebral arteriosclerosis may be made symptomatically worse by antihypertensive drugs. This is the exception rather than the rule. It is similarly uncommon for intermittent claudication or angina pectoris to become worse, but the potentially anginogenic property of hydralazine should be borne in mind.

5. Thiazide congeners have become the commonest drugs employed in the control of hypertension. Although it is necessary to use other drugs concurrently in at least half of the cases, the augmented depressor response with lessened side effects (due to a smaller dose requirement of the concurrent agent) makes the combination economically feasible and therapeutically superior. The greatest single hazard in the widespread use of thiazide drugs is digitalis toxicity.

6. Remediable causes of secondary hypertension should be identified wherever possible. Definitive treatment should then be carried out (e.g., nephrectomy for the hypertension of unilateral renal disease) rather than prolonged therapy with antihypertensive drugs.

7. Special critical situations such as toxemia of pregnancy and hypertensive encephalopathy can be handled quite satisfactorily by means of currently available therapy. Numerous therapeutic programs have been published that permit successful management of these conditions. However, both diagnostic and therapeutic pitfalls are common. If early referral to a large treatment center is possible, the outcome is sometimes more successful.

SUMMARY

The principal classes of drugs used in the current therapy of hypertension have been reviewed. Their relative potencies and common side effects have been noted.

Although hypertension can be significantly lowered by means of currently available agents, the decision to treat a given patient with such agents rests on the evaluation of his total problem.

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Hypertension in Childhood: Disease or Complication?

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HYPERTENSION most frequently occurs in children either as a temporary or permanent complication of some underlying disease process. Unlike the situation in the adult, persistent elevation of blood pressure without apparent cause is an extremely rare finding in childhood. It is well recognized that blood pressure during childhood changes with growth. Table 1 gives normal values for blood pressure at different ages.[1] Definition of hypertension consequently requires that the physician relate blood pressure to age. Blood pressure in a particular pediatric patient must be evaluated not only in respect to age and body configuration (slight or obese), but with regard to the emotional state of the patient at the time of examination, and with particular attention to the use of the proper-sized armcuff for the patient's age. As a general rule, the cuff should cover two-thirds of the upper arm. When the diagnosis of significant elevation of blood pressure appears established, the underlying cause should be sought. Although we do not understand the basic pathogenesis in most instances of hypertension, we can attempt an etiologic classification of this disorder.[2] The major causes of hypertension in children are listed in Table 2. This presentation will be concerned with some of the more frequent hypertensive disorders seen in children.

HYPERTENSION AND BILATERAL RENAL DISEASE

The incidence of sustained hypertension during the acute phase of glomerulonephritis is about 50 per cent.[3] Hypertension may last anywhere from a few days to three weeks, but it usually persists from four to seven days. It is important to remember that hypertension in nephritis is a symptom, and as an isolated finding does not require treatment *per se*. The finding of hypertension on physical examination is important because it is closely associated with two serious complications, cardiac failure and hypertensive encephalopathy, that may occur during the course of acute nephritis. Whenever a physician encounters hypertension in a patient with acute nephritis, he should ascertain whether evidences of these more serious complications are present or impending. Convulsions due to hypertensive encephalopathy rarely occur without prior clinical manifestations that are fairly characteristic. The afflicted child becomes increasingly irritable and restless. Headache occurs, and nausea and vomiting are common, as well as

TABLE 1

NORMAL BLOOD PRESSURES FOR VARIOUS AGES*

Age	*Mean Systolic ± 2 S.D.*	*Mean Diastolic ± 2 S.D.*
2 years	99 ± 25	64 ± 25
4 years	99 ± 20	65 ± 20
6- 7 years	100 ± 15	56 ± 8
8- 9 years	105 ± 16	57 ± 9
11-12 years	113 ± 18	59 ± 10
13-14 years	118 ± 19	60 ± 10

* Reference 1.

TABLE 2

CAUSES OF HYPERTENSION IN CHILDHOOD

1. Renal
 - A. Predominantly bilateral
 Glomerulonephritis, polycystic kidney disease, cortical necrosis, acute renal failure, thrombosis of major renal vessels, obstructive uropathy.
 - B. Predominantly unilateral
 Hypoplasia, hydronephrosis, hydroureter, pyelonephritis, renal tumors, neoplastic metastatic invasion (leukemia), vascular occlusive disease, anomaly or injury, calculi.
2. Endocrine
 - A. Primary
 Pheochromocytoma, Cushing's syndrome, aldosteronism.
 - B. Iatrogenic
 ACTH and adrenocortical hormone therapy.
3. Cardiovascular Anomalies
 Coarctation, patent ductus, aortic insufficiency.
4. Central Nervous System
 Poliomyelitis, encephalitis, space-taking lesions, Riley-Day syndrome.
5. Toxic
 Lead poisoning, acrodynia.
6. Idiopathic
 Essential hypertension.

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visual disturbances. There is usually an accompanying progressive rise in blood pressure. The rate of elevation may be alarmingly rapid, and these patients may develop convulsions within a few hours following the onset of such a crisis, unless the premonitory signs are recognized as an indication for prompt institution of antihypertensive therapy.

The finding of signs and symptoms of cardiac failure with hypertension should also indicate the urgent desirability of initiating antihypertensive therapy in addition to specific treatment of cardiac failure. One of the early signs of impending cardiac failure in the patient with acute nephritis may be a rising pulse rate. There is usually a compensatory reflex bradycardia associated with hypertension in these patients if cardiac function is well compensated. Tachycardia and tachypnea usually precede the more obvious signs of cardiac failure (liver enlargement, rales, venous engorgement and edema). Enlargement of the cardiac shadow by radiogram may be a manifestation of generalized edema, and this finding alone does not necessarily indicate the presence of cardiac failure.

Until recently, parenteral administration of magnesium sulfate was the treatment of choice for lowering elevated blood pressure occurring in the course of acute nephritis. Although this agent can be quite effective if properly administered, the drug is unpredictable in its action, and the therapeutic dose is perilously close to the toxic dose. The search for newer drugs has produced what appears to be a superior new form of therapy. The combination of Apresoline® and reserpine seems to be both effective and relatively free from serious side effects.[4] Experience with other antihypertensive agents (Ansolysen®, hexamethonium, veratrum viridi) in acute nephritis has not been accompanied by evidence of equal therapeutic safety and efficacy. The use of reserpine in acute nephritis requires that it be administered initially by the parenteral route. Treatment of this hypertension, to be effective, requires prompt lowering of blood pressure. Since oral reserpine requires two to three weeks for any beneficial effect on blood pressure, this route is obviously of no value in the treatment of hypertension in acute nephritis. Initially, reserpine, 0.15 mg./kg., and Apresoline, 0.1 mg./kg., are administered intramuscularly. Reserpine is then prescribed orally in a dosage range of 0.5 to 3.0 mg. daily, in divided doses. This daily dosage may be decreased if marked drowsiness occurs. The maximal hypotensive effects of the initial injection usually appear within four to eight hours after the administration, and are attended by drowsiness. If blood pressure subsequently tends to rise again, Apresoline may be repeated at 12-hour intervals in a similar dosage. Reserpine alone may be just as effective in milder cases.[5] Apresoline may at times cause headache and vomiting, and rarely may cause a temporary decrease in urine flow.[6]

Other measures that may be of value in the management of hypertension include the institution of a low salt intake, especially if edema is present. Chlorothiazide does not appear to be of much value in patients with acute nephritis. With control of the blood pressure and its return to normal range for a few days, antihypertensive drugs and salt restriction can be discontinued. This hypertension is only transitory, and its treatment only symptomatic.

These same measures may be of value, though less effective, in the treatment of severe hypertension or of episodes of exacerbation of hypertension in patients with chronic nephritis. In these latter subjects, chlorothiazide may be quite effective as a diuretic and as a hypotensive agent. It is important to call attention to the danger of producing sodium and potassium depletion when chlorothiazide is employed in chronic glomerulonephritis.[7] If salt depletion occurs, it can lead to weakness, vomiting, oliguria, azotemia and renal failure, with serious deterioration of the patient's condition. The physician using this potent agent for prolonged periods must be constantly alert for signs of this serious complication so that proper corrective therapy can be instituted.

UNILATERAL RENAL DISEASE

When investigation of a child with persistent hypertension reveals evidence of a marked disparity in renal function or clear-cut evidence of unilateral renal disease, the physician may be dealing with a remediable type of hypertension. This association has been well documented[2, 8] for a number of diseases, including pyelonephritis, renal hypoplasia, abnormalities of the renal artery, renal tumors, or metastatic neoplastic invasion, calculi and hydronephrosis. The decision to perform nephrectomy in such patients must be made with the full realization that the effect of nephrectomy on blood pressure is quite unpredictable. Whenever nephrectomy is to be considered, it should be done only after complete evaluation to assess carefully the integrity of kidney function. Renal angiography can be of great help in the establishment of an accurate preoperative diagnosis of unilateral renal disease. Abdominal aortography requires considerable experience of the operator, and is not without risk. Serious[9] or even fatal[10] reactions can occur. Iodopyracet I^{131} renograms are a diagnostic technic that is currently under study and may provide a safer means of evaluating renal circulation than aortography.[11]

Although most reports of follow-ups on children with unilateral renal disease and hypertension who have been subjected to nephrectomy are quite encouraging,[8] many unsuccessful efforts go unrecorded. One factor of value in predicting the likelihood of response may be the duration of hyperten-

sion prior to the diagnosis. The younger the subject at the time of diagnosis, the better the likelihood that benefit will accrue from such a procedure. An example of a failure of such efforts can be cited.

Case Report. Patient J. T., an eight-year-old male, was first seen at S.U.I. Hospitals in June, 1952, because of acute cerebral-vascular hemorrhage resulting in a right hemiplegia. Hypertension (blood pressure 140/90 to 160/100 mm. Hg) was present, as was a small hypoplastic left kidney. Nephrectomy was not followed by any significant reduction in blood pressure. Renal function of the remaining kidney was essentially normal pre- and postoperatively. The patient has been followed, and has been asymptomatic in respect to signs of hypertensive cardiovascular disease until recently. This good postnephrectomy course may indicate that some cardiovascular benefit resulted from the operation, even though no relief of hypertension was obtained. The patient, now 15 years old, has grown normally and still has essentially normal renal function as evidenced by a normal BUN and a normal serum creatinine level, persistence of good urinary concentration ability (urine of specific gravity greater than 1.025), and a negative routine urinalysis. The patient's blood pressure has gradually risen slightly during the past few years to levels of 170/110 mm. Hg. The development in the past year of grade II hypertensive retinopathy, some mild left ventricular enlargement and nocturia in association with persistent elevation of the diastolic blood pressure above 100 mm. Hg were considered to be indications in this patient for the institution of long-term antihypertensive therapy. Drug therapy with Apresoline, reserpine and, most recently, chlorothiazide was recently initiated in an attempt to maintain the diastolic pressure below 100 mm. Hg. The patient has survived quite well for the past seven years in spite of hypertension and a residual hemiparesis. This instance must, however, be considered a failure in respect to relief of hypertension by nephrectomy.

Hypertension is not uncommon in cases of Wilms's tumor.[12, 13] Hypertension may be so severe that it is responsible for the presenting complaint.[12] The mechanism of hypertension is not clear. The blood pressure usually falls following nephrectomy, and it may also return to normal after irradiation of the tumor. Recurrence of hypertension may be seen with recurrence of the tumor.[13]

HYPERTENSION AND DISEASE OF THE ENDOCRINE GLANDS

Some types of endocrine disease in children may be associated with sustained elevations in blood pressure. This may be found with Cushing's syndrome,[2] one type of the adrenogenital syndrome,[14] aldosteronism,[15] ovarian agenesis,[2] and most strikingly with pheochromocytoma. The problems encountered in the diagnosis and management of hypertension due to pheochromocytoma have been well presented in a recent report.[16] The type of hypertension found may be either paroxysmal or persistent, but the latter form appears to be more common in children with pheochromocytoma. Patients with persistent hypertension often have episodes of exacerbation in the severity of hypertension which often produce symptoms (hypertensive encephalopathy). In one case, diagnosis was established only after the occurrence of a subarachnoid hemorrhage following such a crisis. Mild hypertension in this instance had been sustained with infrequent episodes of marked elevation in blood pressure. These hypertensive crises were symptomatically associated with pallor, headache and vomiting.

The management of blood pressure in these patients before, during and after surgery can be a difficult task. The operation is not without a significant mortality rate. Once the diagnosis has been established, successful removal of the pressor-secreting tumor requires careful medical supervision, excellent surgical technic, and the use of short (phentolamine) and long-acting (Dibenzyline) adrenolytic agents.

Case Report. It may be of interest to report a case currently under observation at S.U.I. Hospitals with neurofibromatosis and hypertension of unknown cause. The patient (L. L., a female) was first seen at 4¾ years of age, in April, 1952, because of a mass in the popliteal region of the left knee that was proved to be neurofibroma. She has subsequently had other similar masses (scalp, right hip, left thigh), and has been diagnosed as a classic case of neurofibromatosis. Hypertension, blood pressure 130/90 mm. Hg, was also found when she was first seen in 1952. The hypertension has persisted up to the present time, and the blood pressure now ranges from 150/90 to 170/110 mm. Hg. Thorough studies, including a complete urologic workup and, most recently, iodopyracet I^{131} renograms, have failed to provide evidence of significant unilateral renal disease or any other cause for the hypertension. Pheochromocytoma may be present in 5 to 20 per cent of cases of neurofibromatosis.[17] All attempts to demonstrate evidence of pheochromocytoma in this patient have been negative. The studies done have included repeated observations of the blood pressure response to intravenous phentolamine (Regitine®) and the estimation of blood levels of catechol amines (epinephrine and norepinephrine). This patient has no evidence or history of paroxysmal hypertension. Although we have not excluded some form of pheochromocytoma in this patient, we have been unable to demonstrate the presence of such a tumor.

ESSENTIAL HYPERTENSION

In recent years, attention has been called to the occurrence of essential hypertension in children.

An excellent recent report on this form of hypertension is available.[1] This form of hypertension may manifest itself quite early in life. We have observed a boy, now 13 years of age, in whom the presence of hypertension was first diagnosed at two years of age. Complete investigation failed to reveal any specific cause for hypertension in this patient. The patient's father was suffering from essential hypertension that was diagnosed when he was in his late twenties. We considered the boy to be a case of familial essential hypertension of very early onset. The physician dealing with a child suspected of having essential hypertension should investigate other members of the family to ascertain whether the patient may represent an instance of familial essential hypertension.

The patient cited above has been receiving antihypertensive drug therapy for the last two years. He developed grade II retinopathy and frequent headaches. His maximal urinary concentration decreased, and his diastolic blood pressure was consistently above 100 mm. Hg. In the absence of more definite signs of serious hypertensive vascular disease, these findings were considered as justification for instituting long-term medical treatment for hypertension.

Periodic assessment of renal concentration capacity after an 18-hour period of fluid deprivation is one of the most sensitive indices of the integrity of renal function. Impairment of renal function due to hypertensive vascular disease can be demonstrated earlier by this means than by any other routine clinical measurement of renal function (i.e., BUN, urea clearance, PSP excretion or intravenous pyelography).

Whenever the diagnosis of essential hypertension is applied to a child, the physician must bear in mind the rarity of this disturbance in childhood. The possibility of the existence of some other cause must be kept in mind, and the patient should be thoroughly reevaluated at intervals, with this thought in mind. In view of the paucity of reports of essential hypertension in children, little information concerning the course and prognosis of this disorder is available. The findings in a study of 30 patients in whom the diagnosis of essential hypertension was established prior to 25 years of age[18] did not indicate that the course of this disorder in young patients is necessarily more rapid than in older patients.

CARDIOVASCULAR DISEASE

Cardiovascular anomalies associated with hypertension include coarctation of the aorta, patent ductus arteriosus and aortic insufficiency. Of these, coarctation of the aorta most commonly has hypertension as a prominent feature.

Although coarctation of the aorta may occur at any point between the arch and the bifurcation of the aorta, in the great majority of cases it is found just below the origin of the left subclavian artery at the insertion of the ligamentum arteriosus. This anomaly occurs twice as frequently in males as in females. Although the nature of the hypertension found in the vascular system proximal to the coarctation is not entirely clear, mechanical obstruction is considered to play a major role in its production.[19] As a result of the obstruction to blood flow caused by the constricted segment, an extensive collateral circulation develops which increases blood flow to the lower half of the body.

Children with coarctation of the aorta usually have no symptoms, although easy fatigue, headache or cool lower extremities may occur. Attention is often first drawn to the heart because of the finding of a heart murmur on a routine examination sometime between the ages of four and 10 years. The findings on physical examination reflect the pathologic physiology described. There is a visible pulsation in the sternal notch, and there may be evidence of left ventricular enlargement. The enlarged collaterals can sometimes be palpated or seen in older children over the posterior scapular area. A systolic murmur is heard in nearly all patients along the left sternal border. Transmission of the murmur to the back is common. The pathognomonic feature is the finding of hypertension in the arms and a diminished pulse and lowered blood pressure in the lower extremities.

Although there is little symptomatology in the first two decades, over 75 per cent die in the third to fourth decades if not surgically relieved of hypertensive cardiovascular disease, cerebral vascular accidents, rupture of the aorta or subacute bacterial endocarditis.[20] The optimal time for surgical treatment is between 10 and 15 years of age. The operative mortality rate when correction is carried out at this time is very low.[21, 22] In most cases, the hypertension is completely relieved, although it may take two to three weeks before a normal blood pressure is reached following surgery.

Symptomatic coarctation of the aorta in the first year of life is a more serious problem. A sizable group of infants with coarctation develop congestive failure in early infancy.[23, 24] Over two-thirds of such patients have a preductal or infantile coarctation very frequently associated with other cardiac defects.[25] The majority of these die in spite of medical or surgical treatment. Because the mortality rate is so high, some surgeons have advocated early surgery as a life-saving measure.[26, 27] Unfortunately, many of these infants are inoperable because of the complex nature of the cardiac anomalies present. In others, dramatic improvement follows surgical correction. Although surgical treatment in the infant group is technically possible, the risk is higher and the fate of the anastomotic site uncertain. For these reasons, most physicians are conservative in their approach and advocate vigorous medical treatment[28] of congestive

failure and intercurrent infections. If the infant improves, surgery can be postponed. If the course continues downhill, surgery should be considered.

Case Report. The following case history is an illustrative example. A. K. was well until nine days of age, when acute congestive failure developed. Digitalis and oxygen brought about prompt improvement, but diarrhea and an acute respiratory infection later complicated the picture. At six weeks of age, the baby was transferred to S.U.I. At that time, there was evidence of cardiac enlargement and inconstant, short, soft systolic murmur along the left sternal border. Again, the diagnostic findings were those of bounding radial and impalpable femoral pulses. Blood pressure by flush was 180 mm. Hg in the right arm, and 60 mm. Hg in the legs. An electrocardiogram was suggestive of left ventricular hypertrophy, and x-rays revealed gross cardiac enlargement. Digitalis was continued and diuretics used. The baby was discharged on maintenance digoxin, and has continued to show improvement since discharge three months ago. Because of the good response to medical therapy, surgery has been deferred.

Both patent ductus arteriosus and aortic insufficiency may have systolic hypertension, but the diastolic is lower than normal, so that a wide pulse pressure is the characteristic finding. The typical machinery murmur and increased pulmonary vasculature on x-ray will aid in the diagnosis of a patent ductus. A history of rheumatic fever and the characteristic diastolic blowing murmur helps establish the diagnosis of aortic insufficiency. Surgical treatment of a patent ductus arteriosus is indicated in all patients,[29] but the surgical treatment of aortic insufficiency is still far from satisfactory.[30]

CONCLUSION

Hypertension in childhood rarely exists as a primary disease. It is usually a manifestation of some underlying disease process. Advances in diagnostic technics have greatly improved the ability of the physician to establish the primary cause. Measurement of blood pressure should be part of the routine examination of all children. The finding of hypertension in childhood should not be treated casually, but should be considered an indication for thorough investigation to determine the underlying cause. Hypertension can be treated most effectively if the diagnosis of the underlying cause is made early.

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Attend the Annual Meeting of the
AMERICAN MEDICAL ASSOCIATION
Miami Beach, June 13-17, 1960

Renal Disease and Hypertension

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BRIGHT ADDED great impetus to the interest in a relationship between renal disease and hypertension when he observed the syndrome of an enlarged heart, contracted kidneys and elevated blood pressure. A closer study of such patients, however, revealed that the smallness of the kidneys had resulted from vascular changes that were present not only in the renal circulation but in widespread arterial vessels. Nevertheless, this observation, plus the isolation of a vasopressor substance from renal parenchyma extracts by Tigerstedt and Bergmann in 1898, supplied sufficient stimulus for a continued search for a nephrogenic factor in the production of hypertension.

In 1930, Bell and Pedersen succeeded in producing hypertension in a rabbit by constricting the renal vein and wrapping a kidney in a membrane. Almost simultaneously, in 1934, Goldblatt and Page produced hypertension in animals, but by different technics. Goldblatt constricted the renal arteries of dogs by applying clamps, whereas Page wrapped the kidneys in cellophane. As a result of these experiments, there developed a strong feeling that all hypertension had its origin, either pathologic or physiologic, in the renal parenchyma. This concept has since been modified by clinical observation of patients who were suffering with hypertension but had no demonstrable renal disease, and also by the experimental production of hypertension in animals through mechanisms other than impairment of renal function.

KIDNEY DISEASES WITH WHICH HYPERTENSION IS ASSOCIATED

Nevertheless, it has been well documented that certain renal diseases are frequently associated with hypertension. Seventy-five per cent of the patients with polycystic renal disease develop hypertension, and acute and chronic glomerulonephritis are almost always associated with an elevation of the blood pressure. There is very little that can be done surgically for patients suffering with either of these disease processes at the present time. However, we now have evidence that hypertension can be produced by unilateral renal disease or diseases of renal artery which are amenable to renal surgery. Braasch estimated that less than 0.5 per cent of hypertensive patients are potentially curable by surgical measures. However, according to Smith this represents more than 30,000 people in the United States of America, and from this figure we can see that we have only begun to uncover these individuals.

What renal disorders are most frequently associated with the production of hypertension? In general, hypertension is produced when the disease process reduces the renal blood flow per unit mass of functioning renal parenchyma. In other words, there exists a relative ischemia to the residual functioning tissue. In 1942, Flocks described a simple method of estimating relative renal ischemia. A comparison of the amount of renal substance, as determined by a study of the renal shadow on a pyelogram, was made with the renal blood flow through each kidney, as determined by the differential phenolsulfonphthalein excretion. These studies revealed that relative renal ischemia may be present when the pyelographic studies appeared to be within normal limits, and conversely, that ischemia may be absent in the presence of marked pathologic changes within the parenchyma, such as hydronephrosis or pyelonephritis. Therefore, an absolute reduction of renal blood flow alone is not sufficient to produce hypertension, but a more or less normally functioning parenchyma must also be present.

The following is a list of diseases affecting the renal parenchyma and vascular tree that are frequently associated with the onset or aggravation of hypertension:

1. Renal parenchymal diseases
 - (a) Acute and chronic glomerulonephritis
 - (b) Polycystic disease
 - (c) Post-traumatic fibrotic kidney
 - (d) Atrophic pyelonephritis
 - (e) Polyarteritis nodosa
 - (f) Disseminated lupus erythematosis
 - (g) Perinephritis
2. Diseases of the renal artery
 - (a) Embolus
 - (b) Thrombosis
 - (c) Atheromata
 - (d) Neoplasm invading the pedicle
 - (e) Aneurysm
 - (f) Arteriosclerosis.

THEORIES ABOUT THE MECHANISM OF RENAL HYPERTENSION

From the preceding discussion, it would appear that the mechanism involved in renal hypertension is clear cut, but such is not the case. In fact, two diametrically opposing viewpoints exist. There are those who believe that the ischemic kidneys

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release a pressor substance which initiates the vasospasm, the basic disturbance of hemodynamics responsible for an elevated blood pressure. Others support the theory that a function of the kidney is to destroy circulating pressor substance. In the diseased kidney, this function is diminished, allowing the pressor substances to build up in the circulating blood. Actually, these theories may not be so conflicting as at first appears. It is possible that the pressor substances in each case are different, although both are capable of producing hypertension. Those accumulating as a result of renal failure are thought to be mainly catechol amines, and are probably produced elsewhere in the body, whereas those arising in the renal parenchyma are amine residues resulting from the decarboxylation of amino acids. Normally, many enzyme systems are at work in the renal parenchyma. Decarboxylases of certain amino acids have been described. In this process, carbon dioxide is liberated from the amino acid, leaving a residue of amines which are vaso-active substances. This amine residue is usually oxidized by a monamine-oxidase, but under conditions of oxygen-lack secondary to ischemia, this reaction would be diminished, and the amine residue would reenter the circulation to be deaminated elsewhere. In the meantime, they are free to initiate vasospasm and elevation of blood pressure.

Identification of a specific pressor substance responsible for human hypertension has been difficult. Many vaso-active substances have been found in the urine and blood of hypertensive patients, but they probably represent the metabolic products of the original pressor substance released by the kidney. The theory of renin presents an attractive solution, but renin has been found only in the renal venous blood of acute vasospastic states. Pherentasin, a peptide pressor amine, and an as yet unidentifiable substance called "vaso-exciter material" have also been isolated from the renal venous blood of several patients. The relationships of these various substances to each other and to the production of the hypertension is not clear, but whenever a group of substances are capable of producing a single abnormality, they are usually chemically interrelated through a common basic substance which is usually unrecognized at the moment. This seems to be the state of the renal pressor principle at this time.

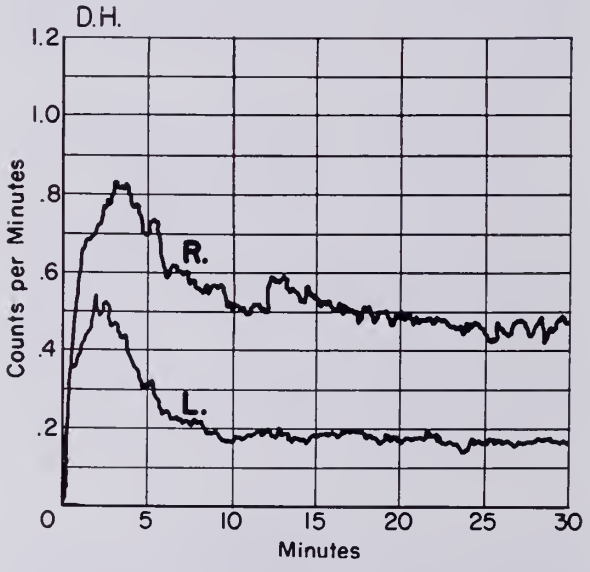


Figure 1. Normal bilateral radioisotope renogram. Prompt rapid rise in activity is due to renal blood flow; additional gradual rise is indicative of renal tubular function; and decrease in activity represents evacuation of radioisotope from the kidneys.

CANDIDATES FOR RENAL SURGERY MUST BE IDENTIFIED

Even though we are unable to explain the mechanism whereby renal hypertension develops, we must continue to identify the cases of hypertension that may be relieved by nephrectomy or reparative renal vascular surgery. Our only hope of interrupting the progressive, unrelenting secondary cardiac and cerebral changes that invariably lead to death is an early recognition of the kidney that is initiating the hypertension, and correction or removal of the abnormality before the process becomes irreversible. The clinical picture encountered in patients suffering with hypertension secondary to renal disease is characterized by a short history of rather severe, intense symptoms. The entire clinical course may be of only a few months' duration. Occasionally, however, it may be superimposed upon a benign essential hypertension, and it is then characterized by a change to a more malignant or accelerated type. Symptoms of increased intracranial pressure—headache, dizziness, vomiting, syncope and convulsions—and cardiac symptoms of palpitation, dyspnea and cough rapidly appear. The systolic pressure becomes elevated (210-230 mm. Hg), with a corresponding elevation of the diastolic pressure. Ophthalmoscopic examination reveals arterial tortuosity. The lumens of the vessels become narrowed, and the veins appear niched at points where they are crossed by the arteries. In the more advanced cases with excessively elevated pressure, papilledema, hemorrhage and exudates appear. The urine may be normal, but occasionally traces of albumin, hyaline or granular casts, or red blood cells may be found.

Since renal disease has been responsible for only a small percentage of hypertension, a search for a reliable screening test has been a prominent feature of the diagnostic investigation of the disease. Excretory urograms have been utilized as a method of identifying the hypertensive who requires further renal diagnostic procedures. When morphological renal changes such as a small, con-

tracted kidney are present, this test has been valuable, but as stated previously, we now have definite proof that even though the kidney appears normal on the execretory urogram, it still may be responsible for the production of hypertension. A quantitative evaluation of this phase of renal function from a roentgenographic examination is not accurate enough. Therefore, we are now utilizing the radioisotope renogram. Taplin, Meredith, Kade and Winter, in 1956, described a method of studying renal function which involved the intravenous injection of radioactive Diodrast and the continuous recording of the activity over each kidney. The resultant curve (Figure 1) has three recognizable portions that can be assigned to the various stages of excretion: blood supply, tubular function and evacuation. The appearance of the radioactive material in the region of each kidney represents the circulation time from an arm vein to the renal artery, and the rapidity with which it rises is representative of the quantity delivered to each kidney. If there is either a delay in the appearance of the radioactivity or a diminished quantity delivered to the renal areas, disease within the arterial tree should be suspected, and further tests performed to identify the type and location of the lesion. The manner in which the tubular cells remove the radioactive Diodrast from the blood stream and transport it to the urine is represented by a further increase in radioactivity as the material becames concentrated in the parenchyma.

Normally, the material is transported promptly, and within five minutes the curve has reached its peak and has begun to drop sharply as the material is carried away through the calyces, pelves and the ureter to the bladder. In our experience, this portion of the curve in patients with hypertension frequently has been very markedly drawn out. The resultant curve resembles the one obtained when an obstruction in the post-renal passageway delays the removal of the radioactivity. However, by pyelography we have definitely established that no obstruction is present. It is difficult to ascribe a quantitative value to these curves, but they are valuable in that the function of each kidney can easily be compared with that of its mate. Furthermore, this can be done rapidly and without discomfort to the patient. At the present time, we are utilizing the excretory urogram and radioisotope renogram as screening methods in determining which hypertensive patients should have further evaluation.



Figure 2. Excretory urogram. Note bilateral function which appears equal bilaterally. Note also that right kidney (13 cm.) is smaller than left kidney (15 cm.).

CASE STUDIES

The following brief summaries of two cases serve to illustrate several of the foregoing situations.

E. W., a 49-year-old white woman, entered the hospital on November 17, 1959, for evaluation of her hypertension. She had been in good health, but in August, 1959, during a routine physical examination, her blood pressure was found to be elevated. She developed ringing in her ears, but

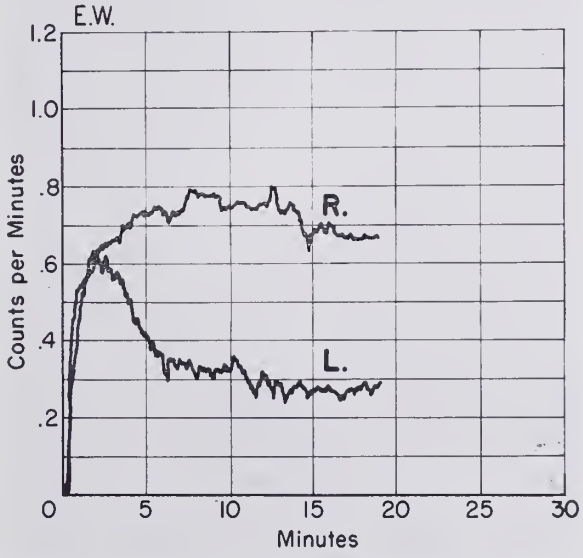


Figure 3. Radioisotope renogram. Left kidney produced normal tracing. Right kidney shows prolonged tubular function and delayed excretion.

denied any other symptoms. At the time of her admission, her blood pressure was recorded as 230-260 mm. Hg systolic and 110-140 mm. Hg diastolic. The positive physical findings consisted of a Grade 3 hypertensive fundoscopic change, niching of the veins, narrowing of the arteries, exudates, and a slight enlargement of the heart. A urinalysis was normal, and the blood urea nitrogen and creatinine were 18 and 0.9, respectively.

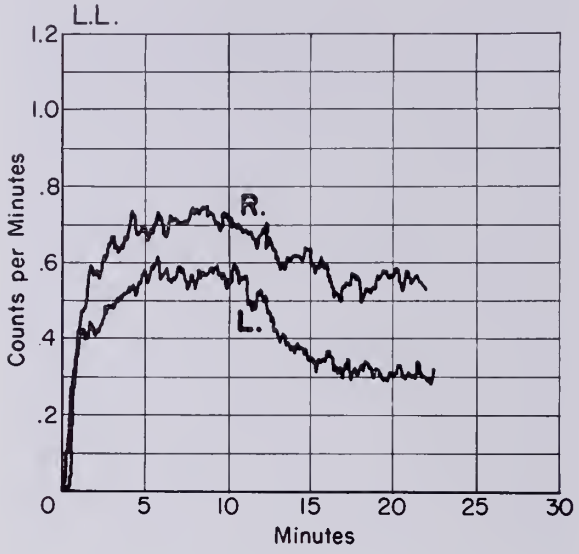


Figure 4. Radioisotope renogram. Both kidneys displayed abnormal curves with prolonged tubular excretion.

An excretory urogram was performed, and it revealed good concentration of the opaque medium from both kidneys. A close inspection of the renal shadows, however, showed the right kidney to be smaller than the left (right kidney, 13 cm.; left kidney, 15 cm.) (Figure 2). Radioisotope renograms demonstrated a normal curve on the left side and an abnormal curve from the right kidney (Figure 3). There was delayed entry of the radioactive material into the right renal artery and a prolonged tubular function as demonstrated by the persistent elevation of the curve. Both screening tests in this individual demonstrated unilateral renal disease as a possible cause of hypertension. Additional renal function tests and angiography supported these findings, and a right nephrectomy was performed with prompt, gratifying decrease in the blood pressure. It has remained at 155/85 mm. Hg for two months.

L. L., an 11-year-old girl, was first noted to have an elevation of blood pressure one year prior to



Figure 5. Renal angiogram. Note defect in right renal artery indicative of plaque within lumen of artery.



Figure 6. Renal angiogram. Right renal artery is small and sclerotic.

admission, at which time she had a neurofibromatous tumor removed from her scalp. There was no past history of renal disease. Aside from the cafe-au-lait spots and the blood pressure of 175/130 mm. Hg the physical examination was within normal limits. Her hemoglobin, white blood count and urinalysis were normal. An excretory urogram revealed prompt function from both kidneys, and they appeared to be normal morphologically. However, the radioisotope renogram (Figure 4) showed similar abnormal curves over both kidneys, which were interpreted as evidence of bilateral renal disease, probably pyelonephritis or glomerulonephritis.

Whenever either or both of these tests indicate an abnormal unilateral renal state that may be responsible for hypertension, more involved and detailed examination of renal function and the renal arterial vessels is undertaken. Renal function is measured by a differential technic which collects the output from each kidney separately. Specimens are collected for an hour in 15-minute portions. The volume and sodium content of the first two specimens are measured, and the last two 15-minute specimens are collected following the intravenous injection of phenolsulfonphthalein. The profile displayed by the kidney responsible for hypertension consists of a 50-60 per cent reduction in volume; a 15-20 per cent reduction in sodium excretion (in other words a relative sodium loss by this kidney); a delayed appearance time of the phenolsulfonphthalein; and a reduction in the total percentage of the dye excreted.

These measurements are of value in that they quantitatively measure the disparity of function between the kidneys, and also indicate the need for further investigation by renal angiography. Additional indications for visualization of the renal arterial tree have been set forth by Poutasse as follows: (1) a difference of 1.0 cm. or more in the length of the renal shadow; (2) delayed excretion of the radiopaque material on the excretory urogram; (3) hypertension in a young individual; (4) the development of malignant symptoms of hypertension in a patient over 55 years of age; (5) non-familial hypertension; and (6) the appearance of an elevated blood pressure following an episode of flank pain.

The pathological lesions generally found in the renal artery that have been associated with the development of hypertension are arteriosclerotic plaques, thrombi, aneurysm and fibro-muscular thickening of the subintimal layer of the artery. Figures 5-8 demonstrate some of these lesions.

CONCLUSION

When it is possible to demonstrate a unilateral process involving the renal parenchyma or the



Figure 7. Renal angiogram. Note complete block in left renal artery just distal to take-off from aorta.



Figure 8. Renal angiogram. Right renal artery small and sclerotic, reducing blood flow through right renal parenchyma.

vessels supplying the kidney, various surgical procedures can be employed in an attempt to correct the hypertension or improve renal function. If the disease is parenchymal in nature, nephrectomy is the operation of choice. Frequently, it is employed for lesions of the renal artery when reparative procedures are not applicable. Occasionally, it is possible to preserve the kidney and improve its function by correcting the disease within the artery by endarterectomy, excision of the diseased segment with end-to-end anastomosis, replacement of the diseased segment with homographs or substitution of the splenic artery for the abnormal segments (spleno-renal arterial anastomosis).

It is imperative to institute surgical therapy for unilateral renal disease as early as possible. Otherwise, permanent vascular changes occur that perpetuate the hypertensive state. Frequently, there is a temporary improvement in the patient's blood pressure which is followed by a resurgence of the hypertension so that cure can only be assumed to have been achieved after years of normal blood pressure readings and no further symptoms of hypertension.

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Congressional Investigations and Bills of Attainder

In undertaking such trials as the current one in which the drug industry is, in effect, the defendant, the Antitrust and Monopoly Subcommittee of the Senate Judiciary Committee has been doing exactly what the founding fathers sought to prevent by setting forth in the Constitution the specific prohibition against bills of attainder . . . legislative acts which inflict punishment without a judicial trial. In these cases the legislative body, in addition to its legitimate functions, exercises the powers and office of a judge; it assumes judicial magistracy, it pronounces the guilt of the party, without any of the forms and safeguards of trial; it determines the sufficiency of the proofs produced whether conformable to the rules of evidence or otherwise.

In this trial by investigation of the drug industry, little attention was paid to the balancing arguments of the defense.

—The public's attention was constantly directed to profits on a single product of a single company—without relating these to the many thousands of products produced by the entire industry, or the overall costs of doing business;

—Hardly any reference was made to the high risks of this industry, which in 1958 had to test 114,600 substances before it could produce 40 marketable drugs;

—Little reference was made to the high degree of obsolescence in the drug industry—where one product can have 99 per cent of the market one year, and only 3 per cent two years later;

—No mention was made of the fact that while wages increased 70 per cent between 1948 and 1958, and construction costs 64 per cent—the increase in the wholesale drug prices was 3 per cent only;

—No mention was made of the fact that the Soviet Union, in which the profit motive does not exist, produced no single new drug since the Communist Revolution;

—And this being a monopoly investigation, it is surprising that nobody bothered to emphasize that more than 1,300 companies are engaged in the manufacturing of prescription drugs—with no one company accounting for as much as 10 per cent of the total sales.

I believe in Congressional fact-finding. But I am, and shall remain, opposed to trial by investigation. Investigating committees must stay within the boundaries of their jurisdiction, and they must pursue fact, not fancy.

—Address by Senator Alexander Wiley (R., Wisc.) at the annual convention of the Iowa Pharmaceutical Association, in Cedar Rapids, March 8, 1960.

Griseofulvin: Its Potentialities And Its Problems

ROBERT G. CARNEY, M.D., AND WILLIAM C. ZIEBELL, M.D.

IOWA CITY

THE DISCOVERY of a new antibiotic substance griseofulvin, which is effective against dermatophytosis when given orally, has proved a boon to many patients and to the physicians who care for them. That the drug is a distinct advance and an important one is amply demonstrated by the literature. However, the drug has failed to solve some of the problems confronting the physician dealing with ringworm, and perhaps has produced some new ones. These difficulties most seriously affect the non-dermatologist, and include problems in diagnosis, duration of treatment, relapses and reinfections, and reactions.

DIAGNOSIS

Perhaps the most immediate and most serious difficulty that confronts those employing griseofulvin, as it does those employing topical fungicides, is the making of an accurate diagnosis. The term *fungus infection of the skin* and related diagnoses are probably more often misapplied than any others in this field, being erroneously used in identifying eczemas of the feet, hands and smooth skin, and in describing intertrigos, impetigos of the scalp, discoid lupus erythematosus, various nail dystrophies and many other non-fungal conditions. Even the most expert sometimes has great difficulty in differentiating some of the above from fungus disease on the basis of clinical appearance alone, and no one comes near to 100 per cent accuracy without help from the microscope or the culture plate.

Griseofulvin does not ease the problem of diagnosis. It is true that griseofulvin generally does no harm, and unlike the effective topical fungicides, will not aggravate non-fungal conditions, but it is still a rather expensive drug, despite at least two recent price reductions. The patient may unnecessarily spend a considerable amount of money before it becomes evident that the griseofulvin is not going to effect a beneficial result.

There is no ideal answer to the accurate diagnosis of dermatophytosis at present. The best answer today is the direct microscopic examination of tissue, a simple and rapid technic and an inexpensive one, but one that requires some experience for correct interpretation. Small portions of skin, nail or hair are removed from an actively involved site, placed on a slide, covered with a coverslip, and then moistened with 10 per cent sodium hydroxide solution. The slide is then heated almost to the boiling point for a few seconds, and can then be examined immediately, by means of the low power objective and a reduced intensity of substage light. When the fungus is present, it is usually obvious, appearing as refractile branching filaments, uniform in caliber, which transverse the tissue without following the cell margins (Figure 1). In hair, one can see spores, in chains or in mosaic sheaths, as well as filamentous elements. Demonstration of these filaments or spores by one accustomed to the procedure is almost absolute proof that the disease is caused by a fungus infection. Unfortunately, the average technician in a private or hospital laboratory is totally inept at this identification, and many false reports result—usually false positives. The physician himself, with a little practice and experience, can do a much more accurate job, and the time involved is less than five minutes.

Cultures of the dermatophytes are probably be-

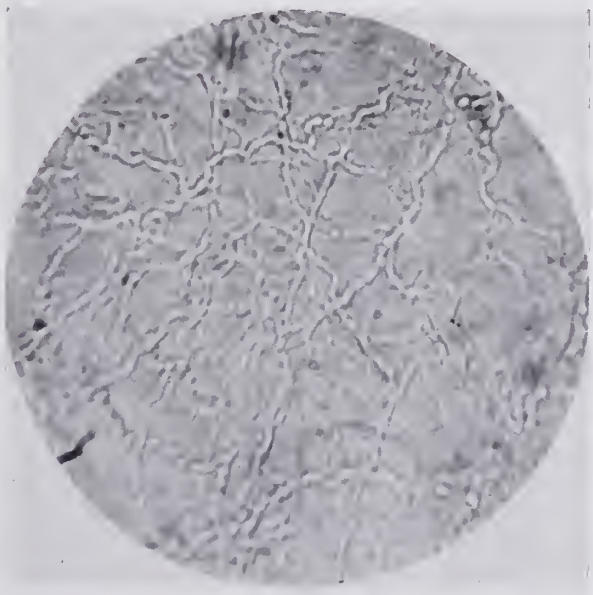


Figure 1. Ringworm organism.

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yond the reach of the non-dermatologist outside of metropolitan centers and teaching hospitals. Dermal mycology is a complex and difficult field, requiring special training and considerable day-to-day experience. It is not within the powers of the general laboratory. However, if one learns to recognize the fungus in the fresh preparation, cultures are unnecessary from a practical standpoint in treating ringworm.

DURATION OF TREATMENT

Another problem confronting the physician is the length of treatment necessary to produce a permanent cure. This problem is more troublesome with griseofulvin than with the topical fungicides, in part because of the deceivingly rapid clinical improvement often seen with griseofulvin and in part because of the peculiar mode of action of the drug itself.

Frequently, particularly in patients with ringworm of the smooth skin and groin, the rate of improvement is phenomenal. The itching may cease within a day, and the redness and scaling disappear within a week. Yet, if the drug is stopped then, or even if it is continued for another week, relapse is very common. Relapse may appear within a few days, but usually after two to three weeks. Hence, excellent clinical response is not necessarily a criterion of a cure.

Griseofulvin seems to behave in an odd way. The drug, or something produced from or by it in the body, has the ability to render new keratin impervious to the invasion of the dermatophytes. It does not destroy fungi already present in keratinized tissues. Hence, the viable fungus may remain for long periods in hair, nails and thickly keratinized areas like the palms and soles, ready to reinvade the skin after treatment has been discontinued. This probably becomes the chief factor in determining the necessary length of treatment for permanent cure. Treatment must be continued until all infected keratinous material has been shed or removed.

In treating onychomycosis, griseofulvin must be continued until completely new nail has been formed, since the initiation of treatment, or the nails may be avulsed a week or two after treatment is instituted. Without removal of the nails, a cure of onychomycosis will require from four to six months for fingernails and six to seven months for toenails, depending upon the speed of nail growth. We have been very successful in treating those with nail involvement by giving griseofulvin for about 10 days, removing the infected nails surgically, and then continuing the drug for another four to six weeks. The procedure is not a difficult one, nor particularly disabling, and may be financially better for the patient because of the vagaries of insurance medicine, unfortunate though the fact may be.

Likewise, in the non-inflammatory types of ringworm of the scalp, it appears that the treatment should be continued until newly formed, uninfected hair has reached above the level of the scalp, at which time the hair is shaved or closely clipped. Three to four weeks is probably sufficient for this. There has been insufficient experience with inflammatory animal ringworm of the scalp, but it appears that griseofulvin may shorten the course when given over a two or three week period. Manual epilation, as quickly as possible, of the hairs from the infected area will probably still be necessary to prevent scarring and consequent baldness, but it may no longer be necessary to epilate a zone of normal hairs outside the infected area.

In the diffuse, hyperkeratotic types of ringworm of the soles and palms, treatment again is likely to be rather prolonged, the fungi persisting in the hyperkeratotic material for many weeks. The simultaneous use of griseofulvin internally and Whitfield's ointment externally may considerably shorten the necessary treatment period. Perhaps the only sure way to prevent relapse is to continue treatment until cultures are negative, but this is impracticable in most situations. Continuation of treatment until the direct preparations are consistently negative *is* practicable, however, and should prevent all but a relatively small number of relapses. Probably one great cause of relapse is the failure to identify rather occult ringworm of the feet or nails in persons with obvious ringworm of other areas. These individuals are able to seed-in new attacks from these occult foci, and may have one relapse after another.

REINFECTION

It appears that reinfection may be a problem in the less inflammatory types of ringworm, particularly those caused by Trichophyton rubrum. This organism causes most of the diffuse keratotic ringworm of the soles, most of the resistant ringworm of the groins, and practically all of the ringworm of the hands and fingernails. It has proved in the past to be a most difficult organism to eradicate by topical therapy, and many persons have carried this infection for decades in spite of concerted treatment. Those widely infected with this organism appear to have a special susceptibility to it, whereas others seem quite immune, and even prolonged infection appears to produce little or no immunity. It is likely that these susceptible persons will easily be reinfected when next exposed at the beach, the pool, the locker room or the bathroom unless some prophylactic measures are taken. Careful attention to the wearing of shower clogs and to the application of fungistatic powders to the feet and shoes may give at least some protection against reinfection. This has been a problem already in some of our

patients, in whose families some other individuals have been infected but have not been treated.

DRUG REACTION

Various untoward results and side effects of treatment have been reported, including urticaria, gastrointestinal upsets, headache, dizziness, insomnia and leukopenia. In general, the side effects have been few, mild and transitory. In our own series, only one patient out of 70 has complained of such effects, and these were mild and vague, and did not interfere with the continuation of therapy. Aspermatogenesis, an effect observed experimentally and one that must be very disconcerting to the manufacturer, the physician and the patient alike, does not seem to occur in human beings at the recommended dosage schedule.

REPORT OF CASES

Since late April, 1959, a total of 70 patients with various types of dermatophytosis have been treated with griseofulvin in a study at the Department of Dermatology and Syphilology at the State University of Iowa.* These 70 patients have received a total of 87 courses of treatment, including repeat treatment in those who relapsed. Of the 70 patients, 55 have returned at least once, and all of those 55 have shown clinical improvement—usually spectacular. Forty of these patients have completed treatment and have been observed long enough and closely enough to provide knowledge as to the effectiveness and length of treatment with griseofulvin.

Of these 40 patients, 33 had ordinary human-to-human dermatophytosis, six had animal ringworm, and one had erythrasma. From cultures, the following organisms were identified in these 40 patients: 29 were Trichophyton rubrum; four were T. mentagrophytes; three were Microsporum gypseum; and three were T. verrucosum. The patient with erythrasma was not cultured. The preponderance of T. rubrum infections is to some degree artificial. These were the most difficult to cure in the past, and patients with this infecting organism constituted a large backlog that posed an acid test for griseofulvin. Infections in these patients ranged in duration from one to over 20 years, and averaged almost seven years.

Eight patients had T. rubrum infections of the groins or of the smooth skin, or both, without evidence of other involvement. Of these eight, three had treatment for two weeks, cleared beautifully, and then relapsed. The five others were treated for 2½ to 6 weeks, and all have remained clear for at least one month. However, one of the three who relapsed following two weeks' treatment relapsed on a second occasion after taking the drug for three weeks.

Twenty-two patients had T. rubrum infections of the feet or hands, with or without nail involvement and with or without involvement of other areas. Three of these had nail involvement, originally unrecognized, and did not have the nails removed. One of these has relapsed three times after courses of 2, 3 and 12 weeks. Another relapsed twice after courses of 2 and 3½ weeks, but has remained clear for 3½ months following a third course of 4½ weeks. The third relapsed once after four weeks of treatment, and is now still undergoing the second course.

The remaining 19 patients either had no nail involvement or had the infected nails extirpated 7 to 10 days after treatment was started. Seven of these relapsed. The average length of treatment in these patients was 3½ weeks. Two of these relapsed a second time after courses of 10 and 13 weeks, and a third has been clear for five months following a second six-weeks course. Twelve of this group had no relapse after at least one month's follow-up. The average length of course in this group was nearly seven weeks. It is interesting to note that three of the seven relapsing patients, and eight of the 12 successfully treated patients had nail involvement. This suggests that treatment is no more likely to fail in patients with nail involvement if nails are avulsed during the treatment.

Four patients had vesicular or interdigital ringworm of the feet due to T. mentagrophytes. All were successfully treated with courses of 2½, 2½, 9 and 3 weeks (average 4 weeks). None of these relapsed, and none had nail involvement.

Among six patients with animal ringworm, three due to T. verrucosum and three to M. gypseum, all were successfully treated with griseofulvin in two to four weeks (average 2½ weeks). Five of these patients had animal ringworm of the glabrous skin. One had kerion of the scalp due to M. gypseum, and the infected areas were manually epilated. Hair growth is complete.

One patient with erythrasma of the axilla cleared in two weeks and has remained healed. One patient who had tinea versicolor in addition to his extensive T. rubrum infection failed to show any improvement in his tinea versicolor after 12 weeks of treatment. At least three persons have suffered reinfections. One, after clearing of a T. rubrum infection of the feet, showed up six weeks later with a T. mentagrophytes infection. Another, living in a family of T. rubrum patients, experienced the appearance of ringworm at a new site one month after treatment, the original remaining clear. A third, living in a similar situation, suffered a recurrence after five months of freedom, and is also considered a reinfection.

Certain dermatophytes do not appear in this

* Fulvicin, the brand of griseofulvin employed in this study, was supplied by the Schering Corporation, Bloomfield, New Jersey.

report. Seven persons in one family with animal ringworm of a relatively non-inflammatory type due to M. felineum are still under treatment. No M. audouini infections were encountered, and T. tonsurans, an organism rarely encountered in Iowa, was also not seen during the period of this study.

CONCLUSIONS

Griseofulvin appears to be a very important step forward in the treatment of the superficial mycoses. In particular, it offers real hope of cure in patients with widespread Trichophyton rubrum infections of the skin and nails. It appears to be a far simpler and safer treatment for epidemic ringworm of the scalp than any that has previously been available, making x-ray epilation and tedious manual epilation unnecessary. It may provide a faster method for the treatment of animal ringworm, and may help to prevent scarring baldness following kerion of the scalp.

The drug does not ease the difficulties of making a diagnosis. Griseofulvin will not cure nonfungal disease. The only proof of the presence of fungi lies in culturing the organism (difficult in most situations), or in demonstrating the fungus in fresh preparations (a method not too difficult to master).

It appears that griseofulvin must always be given over a period longer than the two weeks originally suggested and very often quoted in the lay press. Ringworm involving only the less heavily keratinized skin of the groin and glabrous areas will probably respond in most instances to three or four weeks of therapy at a dosage level of 250 mg. four times a day. Ringworm of the palms and soles, and of the nails if the nails are removed, appears to require about seven weeks of treatment, although somewhat shorter courses may be sufficient if the patient's course is checked by scrapings or cultures. On the other hand, an occasional person with very hyperkeratotic ringworm may require even longer treatment, and topical fungicides and keratolytic agents as well. If avulsion of affected nails is not done, onychomycosis requires between four and seven months, depending upon the rate of nail growth.

Non-inflammatory scalp ringworm appears to require three to four weeks of treatment, followed by close clipping or shaving. Inflammatory ringworm of animal origin in either the smooth skin or hairy parts appears to require about three weeks of treatment also, and at present we feel that the hairs in the infected area should be pulled to speed recovery and to prevent scarring.

Reactions to griseofulvin appear to be uncommon, mild and reversible, both in our series and in reports from most other investigators. This paper constitutes a preliminary report, so far as clinical data are concerned, based upon continuing studies. Modification of some of the assumptions made here may be dictated by more complete data in the future, but it is hoped that this report may serve as a guide, especially to non-dermatologists, in the present-day use of griseofulvin.

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3. Kirk, J., and Ajello, L.: Use of griseofulvin in therapy of tinea capitis in children. AMA Arch. Dermat., **80**:259-267, (Sept.) 1959.

4. Robinson, H. M., Jr., Robinson, R. C. V., Bereston, E. S., Manchey, L. L., and Bell, F. K.: Griseofulvin, clinical and experimental studies. AMA Arch. Dermat., **81**:66-80, (Jan.) 1960.

Note: Each of the above articles contains a rather complete bibliography on griseofulvin for those interested in the original work on this interesting drug.

PEDIATRICS SHORT COURSE IN OMAHA

The University of Nebraska College of Medicine will present the following postgraduate course in pediatrics in the Conkling Hall Postgraduate Conference Room, on its Omaha campus, Monday and Tuesday, April 4 and 5. Except as noted, the lecturers are members of the faculty at the University of Nebraska College of Medicine.

Monday, April 4

8:35 a.m.	"Genetic Considerations of Practical Importance in Pediatrics"—Sidney L. Rubin, M.D.
9:10	"Problems and Routine Care of the Premature Infant"—Dorothy I. Smith, M. D.
9:45	"Indications and Technic for Exchange Transfusions"—F. Marshall Zahler, M.D.
10:30	WARD ROUNDS
1:30 p.m.	"Diagnosis and Management of Congenital Heart Disease"—Kenneth W. Woodward, M.D.
2:30	"Evaluation and Treatment of Rheumatic Fever"—Jerome L. L'Ecuyer, M.D.
3:30	"Cardiovascular Changes in Cystic Fibrosis of the Pancreas"—Gordon E. Gibbs, M.D.
6:00	NEBRASKA PEDIATRIC SOCIETY DINNER MEETING, Blackstone Hotel

Tuesday, April 5

8:30 a.m.	"Problems of Antimicrobial Therapy"—Edward C. Curnen, professor and chairman of the Department of Pediatrics, University of North Carolina
9:15	"Steroids in Relation to Acute Infections"—Edward B. Shaw, M.D., professor and chairman of the Department of Pediatrics, University of California, San Francisco
10:30	WARD ROUNDS
1:30 p.m.	"Current Status of Immunization"—Dr. Curnen
3:00	"Other Problems of Infectious Disease"—Dr. Shaw

State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 51-YEAR-OLD WIDOW was admitted to University Hospitals because of vomiting that had persisted for four weeks. Two weeks before admission, she had seen her family doctor and had been given Thorazine®. The vomiting was not associated with abdominal pain, hematemesis or diarrhea. There was no history of jaundice. Recently, she had been unable to work because of tiredness. The patient's husband had died 10 years previously. Since then, she had lived alone and done housework.

Physical examination revealed an anxious, worried, but cooperative woman, alert and well oriented. The blood pressure was 240/160 mm. Hg in the left arm, and 240/130 mm. Hg in the right arm. The optic fundi showed 2+ arteriolar narrowing, but no hemorrhages or exudates. The carotid arteries in the neck were normal. The heart was of normal size, and there was no overactivity. The rhythm was normal sinus. There were no murmurs. The abdomen was obese, and the soft organs were not palpable. There were no masses or tenderness. The legs were normal, without edema. The peripheral pulses were palpable.

Urinalysis showed a specific gravity of 1.020, 1+ albumin, no sugar or blood, one granular cast and no cells. The hemoglobin was 13.0 Gm./100 ml. The red blood cell count was 4,300,000/cu. mm., and the white blood cell count was 7,000/cu. mm. X-ray films of the chest demonstrated mild prominence of the left ventricular segment. The Danzer ratio was 0.50. A PSP test showed 8 per cent excretion of the dye in 45 minutes, and 15 per cent excretion of the dye in 120 minutes. The BUN was 18 mg./100 ml., the creatinine 1.4 mg./100 ml., and the fasting blood sugar 73 mg./100 ml. The protein bound iodine was 8.9 mcg/100 ml. The electrocardiogram showed left ventricular hypertrophy. Intravenous pyelograms showed prompt bilateral excretion from normal-appearing kidneys.

The patient was given sodium amytal. The blood pressure fell from 220/130 to 160/100 mm. Hg. A number of blood pressures were taken during the period of hospitalization, and some were as low as 150/90 mm. Hg. An ophthalmologist stated that the patient had grade I hypertensive retinopathy. The clinical diagnosis was essential hypertension. Phenobarbital, 30 mg. four times daily, was prescribed. The patient was urged to resume work, and told to return in six weeks.

Fifteen months later, she was admitted for the second time. She entered the hospital four hours after having been found on the floor at home with a left hemiplegia. Her son reported that she had been tired and dizzy for several weeks. The blood pressure was 220/130 mm. Hg, and the pulse was 100 beats per minute. She was conscious, but unable to talk. Her son stated that she was left-handed. She could move her right arm and leg. The carotid pulses were palpable and equal. She rotated her eyes to the left satisfactorily, but had nystagmus on rotating them to the right. The fundi appeared normal. There was no evidence of papilledema, hemorrhage or exudate. The left border of cardiac dullness was slightly to the left of the midclavicular line, the left ventricle was overactive, rhythm was regular, and there were no murmurs. The pupils were 0.6 mm. in diameter, there was a left facial palsy and the palate was pulled to the right. She had no motion on the left, and diminished sensation on the left. The deep tendon reflexes were hyperactive and equal on the two sides. There was bilateral ankle clonus. The plantar reflex was extensor bilaterally.

The specific gravity of the urine was not obtained because of insufficient quantity. The urine contained 2+ albumin, 1+ blood, no sugar and scattered granular casts. The hemoglobin was 15.4 Gm./100 ml., the white blood cell count was 15,600/cu. mm., and a lumbar puncture showed an initial pressure of 180 cm. H_2O and a final pressure of 140 cm. H_2O. The fluid contained bright red blood evenly distributed in all tubes. The BUN was 8 mg./100 ml., the creatinine 1.0 mg./100 ml., the blood sugar 98 mg./100 ml., the sodium 138 mEq./L, the chloride 98 mEq./L, the CO_2 content 24 mEq./L, and the potassium 3.8 mEq./L.

The patient was treated with intravenous fluids, 0.5 mg. of reserpine intramuscularly every 12 hours, and good nursing care. The blood pressure fell to 130/100 mm. Hg. With this exception, the patient did not improve. By the thirteenth hospital day, she was having fever, tachycardia and considerable respiratory difficulty. She was cyanotic, and there was evidence of tracheal obstruction. A tracheotomy was done in order to facilitate ventilation and clearing secretions from the tracheobronchial tree. The patient died six hours after the tracheotomy.

SUMMARY OF CLINICAL DISCUSSION

Dr. William B. Bean, Internal Medicine: The task of discussing a case in a clinical pathologic conference is one that I have had some experience with. Depending upon the subject and upon whether one feels he is among friends or enemies, he varies his plan of surveying the facts that have been presented in the protocol. CPCmanship con-

sists principally of being able to tell what is a red herring and what is a fish. The object of the framer of the protocol may have been to make the clinician fall on his face.

In this instance, we shall take the evidence before us at its face value, and assume that no effort has been made to make things seem more complicated than they actually were. What can we learn about this woman from the facts laid before us in the stark and formal terms of the protocol? Very little. She was a widow. We aren't told much about her past health, but there is no indication that she had been sick often. Fifteen months before her last admission, she had come to the hospital because of vomiting that she had endured for a period of four weeks. She had been tired and couldn't do her housework.

The only significant findings on admission were a rather severe hypertension, with diastolic pressures in the range of 160-130. She had arteriolar narrowing of the retina, but no edema of the nerve head, hemorrhages or exudates. The carotid arteries were normal. With hypertension and arteriosclerosis, one may get buckling of the carotid artery, particularly on the right, which sometimes is mistaken for aneurysm. Thrombosis of a carotid artery may explain a tendency for a person to have recurring little strokes or large ones. I don't think carotid thrombosis is what we are dealing with here.

There was some enlargement of the left ventricle. The heart was at the upper limit of what we call normal. There was some impairment of renal function indicated by a reduced prompt excretion of PSP. One gets a better clue to renal function from what occurs in the first 15 minutes of the PSP excretion test than from the total excretion. If a good portion of the dye is not excreted early, one is led to suspect that all is not well with the kidneys. The blood urea nitrogen and creatinine were not out of line. There was electrocardiographic confirmation that the heart was big. The fact that the blood pressure fell significantly under the influence of sodium amytal means that the hypertension could be reversed. Perhaps it was of recent origin or was benign in its course. The patient was treated symptomatically. The diagnosis was essential hypertension.

Might she have had any of the rarer causes of hypertension for which there is a surgical cure? Pheochromocytoma is something that we need to think about even in what seems to be perfectly orthodox essential hypertension. We shall assume that the patient didn't have coarctation, for there is no explicit comment that femoral pulses were weak or that there was any etching or erosion of the under part of the ribs. With prompt and active excretion of the dye on intravenous pyelography, we can exclude significant unilateral renal disease.

Then there is silence. The patient was supposed to come back in six weeks. Probably she felt so well that she didn't think the trip worth while. The next chapter in her story begins abruptly. In an instant, she was seized by a hemiplegia that knocked her down. She was found on the floor—immobile, speechless. She was left-handed and her left side was paralyzed. As far as control of the speech mechanism is concerned, this is analogous to the right-sided hemiplegias in right-handed people who get aphasia. She was conscious, but was unable to say whether she had headache. The neurological findings are consistent with classical hemiplegia. There was no papilledema, and thus she wasn't in the malignant stage of essential hypertension. Her blood pressure wasn't remarkably different from what it had been in the hospital 15 months previously. Perhaps the heart was bigger. There was no congestive failure. Sensation on the left side was reduced. The patient had bilateral ankle clonus and bilateral Babinski reactions. The urine had some albumin and blood. The hemoglobin was high, rather than low, and the white cell count was a little bit elevated, but not so much as we often see in persons with cerebral hemorrhage.

The most important laboratory finding was grossly bloody spinal fluid. The pressure was not so great as one would anticipate in cerebral hemorrhage, though consistent with it. Her kidneys were functioning normally in clearing urea from her blood. The creatinine was normal when she came into the hospital. The fluid and electrolyte equilibrium was not impaired and didn't present a problem during her remaining days in the hospital. Despite the fact that her blood pressure came down, she continued to deteriorate. Ultimately, she was very difficult to care for because she couldn't cough and remove secretions from her lungs. Ultimately, because she was having fever, presumably from bronchopneumonia, tachycardia and great respiratory distress, it was necessary to open her trachea.

In all likelihood, this woman had essential hypertension. One finding is a little disturbing. She had hematuria. The albuminuria and hematuria were out of proportion to the vascular lesions in the retina. Could she have had some kind of inflammatory lesion of the arteries? Polyarteritis seems very remote. I cast that out, as I have already discarded pheochromocytoma, coarctation and unilateral renal disease, because such conditions are rare and no clues point to them.

The differential diagnosis of the kind of stroke is important. Was it caused by hemorrhage, thrombosis, embolus, brain tumor or brain abscess, perhaps with bleeding or even mechanical dislocation? We have nothing to suggest that this woman had a brain tumor. There was no sign of increased intracranial pressure. Her spinal fluid, though bloody, wasn't under high pressure. There was nothing to suggest a brain abscess. Isolated brain abscesses are difficult to detect. They may present

classical signs of brain tumor, hemiplegia or focal neurologic disease.

I shall review briefly some of the points in the differential diagnosis of cerebral hemorrhage, thrombosis and embolus. It is important to know where an embolus comes from, whether myocardial infarction, chronic atrial fibrillation or bacterial endocarditis, or rarely a paradoxical embolus comes from a systemic vein. Hemorrhage produces the most serious, the most catastrophic and the most dramatic alterations. Cerebral thrombosis produces less grave, less dramatic and less severe signs and symptoms. Embolus usually is midway between thrombosis and hemorrhage. The peak incidence of cerebral hemorrhage is about at age 60, cerebral thrombosis at 65 and cerebral embolus in the middle 50's or earlier. This woman in her early 50's was within the age group to whom any of these vascular accidents can occur. Cerebral thrombosis is preponderantly but by no means exclusively a disease of men, whereas women and men are equally susceptible to cerebral hemorrhage. A history of previous vascular accidents occurs least often in hemorrhage patients and with about equal frequency in ones with cerebral thrombosis or cerebral embolus. It has happened before in approximately one-third of the patients. Previous vascular accidents will have occurred in less than 20 per cent of patients with cerebral hemorrhage. We have no knowledge of any previous cerebral vascular difficulty in this woman. That lack of history is at least consistent with cerebral hemorrhage. There is some seasonal variation in incidence. Cerebral hemorrhage is more likely to occur in the cool months of the year—late fall, winter and early spring. But since the protocol fails to tell us when the patient became ill, this is of no help. Coma is a presenting sign in one-half of the people with cerebral hemorrhage, in only about one-fourth of those with cerebral thrombosis, and in even fewer of those with cerebral embolus. Convulsions are commoner with hemorrhage than with thrombosis or embolism. Headache is severe most often in cerebral embolus, next most often in cerebral hemorrhage, and only very rarely in cerebral thrombosis. In general, the neurologic signs vary in degree. One sees a most extreme paralysis, the most extensive neurologic involvement, and the most exaggerated pathologic reflexes, clonus, Babinski signs and so forth with the serious brain disorganization that occurs in cerebral hemorrhage. The manifestations are fewer and milder with embolus, and least with thrombosis.

This woman's difficulty seems to be explained best on the basis of cerebral hemorrhage, a complication of vascular disease of the brain. I should be surprised to learn that she had any rarer condition. She illustrates the tremendous problem that people with acute and chronic neurologic difficulties present in diagnosis, management and nursing care. Aspiration bronchopneumonia is common if not inevitable. Secretions accumulate because the cough reflex isn't working properly. This aspect of the problem will be discussed in more detail by Dr. Hamilton.

My conclusion is that this woman had essential hypertension—benign, if one can refer thus to a disease that kills—that she had cerebral arteriosclerosis, and that she developed a hemorrhage of the lenticulostriate artery on the right side. She became unable to take care of her own cardiorespiratory housekeeping, and ultimately died as a sequel, not so much of the brain damage *per se,* for she might even have recovered from that, but from the failure of essential neuromuscular mechanisms having to do with cough, breathing, swallowing and gagging—all of which were more or less out of business. The possibility that she had brain tumor or abscess strikes me as so improbable that I shall dismiss them from the discussion.

I shall have some words to say later on, if things turn out to have been completely different from what I have supposed them.

Dr. William K. Hamilton, Anesthesiology: Mr. Becker, will you give the student opinion?

Mr. Arthur A. Becker, Jr., Junior Student: We believe that this patient had moderately severe essential hypertension, then a hypertensive intracerebral hemorrhage, and died as a result of the respiratory depression and the hypostatic pneumonia.

Dr. H. W. Fischer, Radiology: A rather ordinary chest film showed a little bit of enlargement of the heart and its left ventricular component. The aorta was not unusual. We had no evidence of notching of the ribs such as would be found in coarctation, and there was no evidence of calcification of either the aorta or the large branches of the arch.

A photoroentgenogram taken at about the same time showed essentially the same thing.

The pyelogram reported in the chart was normal.

Dr. Sidney E. Ziffren, Surgery: How did you rule out pheochromocytoma, Dr. Bean?

Dr. Bean: I didn't rule it out. I said it was very improbable because there were none of the usual features that go along with it. Paroxysmal hypertension, rather than sustained hypertension, is commoner in pheochromocytoma than in other forms.

Dr. E. E. Federici, Resident, Internal Medicine: Was a Regitine test done?

Dr. Hamilton: No. The clinical diagnosis on this patient was essential hypertension, cerebral hemorrhage, arteriosclerosis and terminal congestion of the lung, and cardiac failure.

CLINICAL DIAGNOSES

Essential hypertension
Cerebral hemorrhage
Cardiac failure

DR. WILLIAM B. BEAN'S DIAGNOSES

Essential hypertension
Cerebral hemorrhage

ANATOMIC DIAGNOSES

1. Right intracerebral and intraventricular hemorrhage
2. Bronchopneumonia, early
3. Hyperplasia of adrenal medullae
4. Chronic peptic ulcer, pylorus
5. Myocardial hypertrophy, left ventricle
6. Arteriosclerosis, generalized, mild
7. Arteriolar nephrosclerosis, moderate
8. Acute esophagitis
9. Chronic congestion of liver
10. Hypertension (clinical)

Dr. F. P. Aleu, Pathology: Both Dr. Bean and the speaker for the junior students caught the right fish and were not disturbed by any red herring. The patient did have essential hypertension. Later on in the discussion, however, I shall make a small effort to delete the "essential" part of it. I may fail.

The autopsy findings were abundant and related to several organs. There was an extensive recent hemorrhage in the right cerebral hemisphere posterior to the basal ganglia, which extended into the lateral ventricle and accounted for the blood present in the cerebrospinal fluid. The area of hemorrhage was approximately spherical and measured 3 cm. in diameter. The patient also had, as predicted, a terminal bronchopneumonia which was bilateral, fairly extensive and necrotizing.

An unsuspected finding was a gastric peptic ulcer. It was bleeding, and resulted in a moderate intra-intestinal hemorrhage within the small and large bowel.

As one would expect in a case of long-standing hypertension, the left myocardium was hypertrophic. The kidneys exhibited a few foci of mild arteriosclerosis which, it was felt, were unrelated to the hypertension. The thyroid and hypophysis were essentially normal. The adrenals were free from neoplastic processes, but had large medullae —about three to four times the normal size. Whether or not this is the organic explanation for the hypertension is difficult to establish with certainty, but perhaps deserves a short comment.

Microscopically, the adrenal cortices had an essentially normal appearance. The medullae were highly cellular, and the constituent elements were rather large, uniform and moderately hyperchromic, and had a tendency to arrange themselves around small vessels or to form short cords. No evidence of neoplasm was found.

Hyperplasia of the adrenal medulla is a concept which it seems easy to admit to the ranks of recognized entities. Yet, recent textbooks of pathology flatly deny its existence, while cheerfully accepting cortical hyperplasia as a secretless good friend. I am not trying to base this patient's hypertensive difficulties on adrenal medullary hyperplasia, but with only a modest liberalism one could entertain this possibility. It is unfortunate that we don't have studies concerning the output of epinephrine and norepinephrine, and evidence of a high catechol amine output in the urine.

Perhaps it is pertinent to say that in January, 1957, in the BRITISH JOURNAL OF MEDICINE, there was a paper by Dr. Drukker postulating a causative role for adrenal medullary hyperplasia in a case of hypertension. Vaques, Giraud and Leriche, in France, had played with the same idea many years ago. It seems that this concept of medullary hyperplasia could stand some reexamining, on the chance that it may be surprisingly valuable in explaining some cases of hypertension.

Dr. Hamilton: I'd like to ask a couple of questions, and to direct them toward Dr. Kirkendall. As I understand it, this case is clinically different from pheochromocytoma. I want to know why. Are there different types of endocrines or secretions? Is there a difference in the intermittency of chronicity? Is this a real entity which produces hypertension? Is this something that is likely to be diagnosed in an antemortem state, and if so, what did we miss?

Dr. Walter M. Kirkendall, Internal Medicine: Since I have never seen a patient with bilateral adrenal medullary hyperplasia, my comments on this point must be taken with proper weight being attached to them. I suspect, however, that there might be a different ratio of norepinephrine and epinephrine liberated by a hyperplastic but otherwise normal gland, as opposed to that liberated from a pheochromocytoma. If this were so, the hypertension which resulted from medullary hyperplasia might be of a different variety from that produced by a pheochromocytoma. The norepinephrine excretion of most pheochromocytomas is quite high. This probably accounts for the similarity of the hypertension from pheochromocytoma and that from essential hypertension—namely, the diastolic pressures are frequently high, the pulse pressure is not wide and the cardiac output is normal. On the other hand, if there were a high content of epinephrine coming from the hyperplastic adrenal medulla, one might then expect to see hypertension of a wide pulse pressure variety, with a high cardiac output. The protocol suggests, however, that the patient discussed today had hypertension which is entirely compatible with that of many cases of pheochromocytoma.

What could have been done to diagnose this disease? Despite some problems with false-positive and false-negative reactions, the Regitine test, had it been used in this patient, might have given us information of diagnostic importance. As you know, this test is based on the fact that Regitine will inactivate circulating catechol amines. If they are present in abnormal amounts and if hypertension

also is present, the blood pressure will fall precipitously after Regitine. One must be sure, however, that the blood pressure is elevated before the Regitine test is used, since diagnostic features of the test cannot be observed if blood pressure is under roughly 160/100 mm. Hg. Although at times some alarming symptoms can result after the use of Regitine intravenously, the mortality and morbidity from the use of this drug is very low. If large amounts of catechol amines were being secreted from the adrenal medulla in this patient, then we could have detected this increase by measuring catechol amines in the urine or blood. I think it would have been of great value to have had one or all these tests done in this patient.

Dr. Bean: Would you recommend that every person with hypertension have a Regitine test and intravenous pyelograms?

Dr. Kirkendall: I would not recommend that every person with hypertension have a Regitine test since there are many older patients with mild varieties of blood pressure elevation who have no symptoms from the disorder and who do not need such an extensive work-up. Such persons do need to have a careful history and physical examination, however, to demonstrate that they do not have these symptoms and signs of pheochromocytoma. In general, the Regitine test is a very useful one for most young and middle-aged hypertensives and for those who have a hypertension which is unusual in any way. For instance, I think it is mandatory that persons who have hypertension with a history of paroxysmal arrhythmias, bouts of pulmonary edema or encephalopathy be studied by either this test or one which provokes hypertension in patients with pheochromocytoma.

Dr. Bean: Where do you draw the line between the young and the old?

Dr. Kirkendall: In general, I am not inclined to use the Regitine test on anyone over the age of 60 unless there is an indication for it. Obviously, pheochromocytomas occur very often in persons over 60, but most frequently you have an indication that blood pressure elevation is not of the usual type, and this will enable you to use the test selectively. I am inclined to obtain intravenous pyelograms on most patients with hypertension who have not been given this test. I'll leave this matter right here, because I think I can defend such a routine practice better than I can the Regitine test for each person with high blood pressure.

Dr. Hamilton: I should like to ask Dr. Kirkendall one question before he sits down. We are now using many antihypertensive drugs. The pharmacology books and the brochures that come with the little vials tell us that these drugs deplete the body stores of catechol amines or epinephrine-like substances. It is possible that this lady's condition could have arisen as a compensation phenomenon to antihypertensive therapy of this nature. We have no history that she was given anything of this sort until her terminal episode, but isn't this a reasonable possibility?

Dr. Kirkendall: I don't know to which drug you are referring, but some very recently introduced ones might do this. I am sure that this woman had not had any of these medications. I would like to mention that this patient might have benefited from drug therapy, had she had straightforward essential hypertension. Evidence is accumulating now that patients effectively treated with antihypertensive drugs over a long period of time have a lower rate of cerebrovascular accidents due to hemorrhage. They also have much less trouble with heart failure and other vascular disorders, although they still continue to have a high incidence of cerebrovascular thrombosis. Thus, since this patient died from a cerebral hemorrhage, drug treatment might have prevented it if essential hypertension were her disease.

The second point I should like to make is that one must give large doses of reserpine, such as this woman had during her terminal episode, with some caution. We have had trouble with patients who have received such doses of reserpine. They have developed tenacious tracheal secretions and subsequent respiratory embarrassment. This is probably due to the parasympathomimetic effect of reserpine, and the lethargy and drowsiness which it produces makes treatment for the thick secretions difficult. In general, however, I think that the lowering of her blood pressure, either by reserpine or by the bleeding peptic ulcer, was good treatment for the bleeding cerebral vessel.

Dr. Paul M. Seebohm, Internal Medicine: When she first was seen, her blood pressure was 240/160 mm. Hg, and when she had been in the hospital for only two or three days and had had a sodium amytal test, her blood pressure dropped to 150/90 mm. Hg. Is this an unusual drop for what is called labile essential hypertension?

Dr. Kirkendall: Yes.

Dr. J. A. Buckwalter, Surgery: The histamine test is used as a provocative test for the diagnosis of pheochromocytoma. Should this test have been used in this patient?

Dr. Kirkendall: The histamine test should be used in those patients who have normal or almost normal blood pressure when one suspects the presence of pheochromocytoma. There is little reason for using it initially in any patient who has a blood pressure over 160/100 mm. Hg. It can be used as a later diagnostic tool in some patients after a positive Regitine test, but there is not much point in using it prior to the Regitine test since the latter is safer and causes fewer alarming symptoms.

Dr. Hamilton: The subject of catechol amine determination and its ramifications has been brought up several times during the discussion, and I have asked Dr. Dryer, from the Department of Biochemistry, to speak a few words on this subject.

Dr. R. Dryer, Biochemistry: Well, perhaps the

latest word on catechol amine determinations is that we may not be doing them much longer. They may be superseded by something which will, perhaps, be more valuable and certainly will be more expeditious. Of course there is always the question of whether these should be measured in the blood. We prefer to measure them in the blood because by doing so we get a more discriminating view of what is going on inside the patient. It is our theory that what is now in the urine is not really of much biological moment. It represents something that *has been* in the blood. Most recently, it has been recognized that norepinephrine is the hormone responsible primarily for pressor effect. It is the one that is producing hypertension. A whole host of new metabolites and new compounds related to what we classically term catechol amines has been uncovered. New enzymatic processes have been described, including one by which a methyl group is attached to one of the phenolic hydroxyls. If you don't know what all this means, go back and look up your old Harper and see what formula he has mentioned. When one of these phenolic groups is methylated, something very interesting happens. The pharmacologic effect of this drug is transferred from the periphery to the central nervous system. This has some significance, I am sure, in the management and long-term outcome of the hypertensive individual. It has also been found that although the level of catechol amines present in blood or urine is very small, and is measurable only in the microgram range, the presence of some of the methylated intermediates occur in the milligram range. There is also some hope that the technic and analysis will be separated, and I think that this can be brought about. We are studying methods so that we'll have something more nearly suitable as a screening procedure than as a semi-research procedure. I surely think that in concordance with what has already been said this person should have been checked.

Dr. Kirkendall: Dr. Dryer, why do you prefer to measure catechol amines in the blood rather than measuring these same substances in the urine? The reason for the question is that a very minimal rise in blood catechol amines over a 24-hour period may cause the urinary excretion of large amounts of these substances, while at the same time one would have great difficulty being sure that the blood level of catechol amines was actually increased. The situation is the same as that with pancreatic enzymes in pancreatitis, where one may frequently find greatly elevated urinary amylase with little or no detectable increase in the blood amylase.

Dr. Dryer: Yes, there is a certain measure of truth in what you say, but at the same time, if we deal with paroxysmal hypertension, I think we can catch a sufficient rise at the peak of this episode or shortly after so that there is no question about deciding whether the level is elevated or not.

Dr. Bean: We aren't always dealing with paroxysmal hypertension.

Dr. Dryer: To be sure, under these conditions one has two alternatives. We can then determine the catechols in the urine, thus getting around the question but not answering it, or we can actually work with larger volumes of blood. There is a point of diminishing returns here, however, and we must keep it in mind. A small transient rise is diluted out in a large volume of urine, and thus it is harder to measure accurately. Furthermore, if we want to analyze the level in urine, it takes us several days longer to get the answer than if we were to measure it in blood. Judging from the demands which have been made on the laboratory, time is of the essence.

Dr. Bean: I'd like to emphasize a couple of clinical points. There is a curious tangential relationship between von Recklinghausen's disease and pheochromocytoma. If a patient with hypertension has neurofibromatosis, one should be led to seek out the chemist to see whether the catechol amines are elevated.

Another point, which I believe was discovered by Dr. Braley, is that some persons with pheochromocytoma—whether or not they have neurofibromatosis too—may have peculiar medulated nerves running in a sort of lacework over the cornea, not visible to the eye and not obscuring vision. They may be seen with the slit lamp. Such an observation has led to the diagnosis of pheochromocytoma without even the taking of a blood pressure. One point of differentiation is that most patients with thyrotoxicosis who get tachycardia have an elevation of only the systolic blood pressure and not the diastolic, whereas the paroxysmal elevation of blood pressure in pheochromocytoma includes diastolic elevation as well as systolic. After mentioning rare complications, I cannot say that the adrenal medulla, which was puffed up to three times the natural size, was not manufacturing some guilty catechol amine. I still believe that this patient had essential hypertension.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 24-27, 1960

Veterans' Memorial Auditorium

Des Moines

Coming Meetings

In State

April 1	**Pediatric Conference (The Raymond Blank Memorial Hospital Association).** Younker Building, Iowa Methodist Hospital, Des Moines
April 6-8	**Iowa Tuberculosis and Health Association Annual Meeting.** Hotel Savery, Des Moines
April 24-27	**Annual Meeting, Iowa State Medical Society.** Veterans Memorial Auditorium, Des Moines
May 11-13	**Rare Earths in Biochemical and Medical Research.** Iowa State University, Ames

Out of State

April 1	**Spokane Society of Internal Medicine.** Spokane
April 1-2	**American College of Surgeons, West Virginia Chapter.** The Greenbrier, White Sulphur Springs
April 1-2	**American Gastroenterological Association.** Roosevelt Hotel, New Orleans
April 1-3	**American Society of Internal Medicine.** Palace Hotel, San Francisco
April 1-3	**American Society for the Study of Sterility.** Sheraton-Gibson Hotel, Cincinnati
April 1-3	**Midwestern Sectional Meeting, Biological Photographic Association.** St. Francis Hospital, Milwaukee
April 1-14	**Bahamas Medical Conference.** British Colonial Hotel, Nassau, Bahamas
April 3-6	**American College of Obstetricians and Gynecologists.** Netherland Hilton Hotel, Cincinnati
April 3-6	**American Surgical Association.** The Greenbrier, White Sulphur Springs
April 4-5	**Pediatrics.** University of Nebraska College of Medicine, Omaha
April 4-6	**Clinical Reviews (Mayo Clinic and Mayo Foundation).** Rochester, Minn.
April 4-6	**Ophthalmology.** University of Kansas School of Medicine, Kansas City
April 4-7	**International Anesthesia Research Society.** Washington, D. C.
April 4-8	**Symposium on Tuberculosis and Other Pulmonary Diseases in Childhood.** New York University Post-Graduate Medical School, New York City
April 4-9	**Annual Meeting American College of Physicians.** Mark Hopkins and Fairmont Hotels, San Francisco
April 4-9	**Thirty-Third Annual Spring Congress in Ophthalmology and Laryngology.** The Gill Memorial Eye, Ear and Throat Hospital, Roanoke
April 5	**Fundoscopy in Internal Medicine.** University of Southern California, Los Angeles
April 6	**American Society of Facial Plastic Surgery.** Hotel Elysee, New York City
April 6-8	**Otolaryngology.** University of Kansas School of Medicine, Kansas City
April 7-8	**Respiro-Cardiac Resuscitation (The American College of Cardiology).** New York City
April 7-9	**American Association of Railway Surgeons.** Drake Hotel, Chicago
April 7-9	**Emergency Surgery for Surgeons.** Center for Continuation Study, University of Minnesota, Minneapolis
April 7-10	**American Association for Cancer Research, Inc.** Chicago
April 8-9	**Mid-Central States Orthopaedic Society.** Wichita
April 8-9	**North Pacific Society of Neurology and Psychiatry.** Benjamin Franklin Hotel, Seattle
April 8-10	**Emotional Problems in Pediatric Practice.** University of California, Los Angeles
April 8-12	**American Dermatological Association, Inc.** Boca Raton Hotel, Boca Raton, Florida
April 8-12	**Florida Medical Association.** Robert Meyer Hotel, Jacksonville
April 9-10	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Pick-Nicollet Hotel, Minneapolis
April 9-12	**Texas Medical Association.** Hotel Texas, Fort Worth
April 10-11	**American Society for Artificial Internal Organs.** Pick-Congress Hotel, Chicago
April 10-13	**Tennessee State Medical Association.** The Maxwell House, Nashville
April 11-13	**American College of Surgeons, Sectional Meeting.** Hotel Leamington, Minneapolis
April 11-13	**Anesthesiology.** University of Kansas School of Medicine, Kansas City, Kans.
April 11-13	**Radiology for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
April 11-15	**American Association of Immunologists.** Chicago
April 11-15	**American Physiological Society.** Chicago
April 11-15	**Federation of American Societies for Experimental Biology.** Chicago
April 11-15	**American Society for Experimental Pathology.** Pick-Congress Hotel, Chicago
April 11-16	**American Association of Anatomists.** Statler-Hilton Hotel, New York City
April 11-16	**American Society of Biological Chemists, Inc.** Chicago
April 13-15	**American Public Health Association, Southern Branch.** Memphis
April 13-17	**Harvey Cushing Society.** Fairmont Hotel, San Francisco
April 14	**American College of Surgeons, Sectional Meeting.** Kahler Hotel, Rochester, Minn.
April 14	**Ward Walks in Rare Diseases.** University of Southern California, Los Angeles
April 17-20	**Arkansas Medical Society.** Pine Bluff
April 18-19	**American Association for the Advancement of Science, Section on Medical Sciences.** Vanderbilt University, Nashville
April 18-19	**Society of Head and Neck Surgeons.** Sheraton Hotel, Philadelphia
April 18-19	**Society of Neurological Surgeons.** Olympic Hotel, Seattle
April 18-20	**Gallbladder Surgery.** Cook County Graduate School of Medicine, Chicago
April 18-20	**Surgery of the Hand.** Cook County Graduate School of Medicine, Chicago
April 18-29	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
April 18-May 13	**Radiation Hygiene Measurements.** NYU-Bellevue Medical Center Postgraduate Medical School, New York City
April 18-May 16	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
April 20-June 1	**Surgical Anatomy: Head and Neck.** College of Medical Evangelists, Los Angeles
April 20-22	**Medical and Chirurgical Faculty of the State of Maryland.** The Alcazar, Baltimore
April 20-23	**American Academy of Pediatrics.** Atlantic City
April 20-24	**Sixth International Congress, Association of National European and Mediterranean Societies of Gastro-Enterology.** Leiden, Netherlands
April 21-22	**Southern Counties Regional Postgraduate Institute.** Palm Springs Riviera, Palm Springs
April 21-22	**Respiratory Physiology in Childhood.** University of Kansas School of Medicine, Kansas City, Kans.
April 21-23	**Medical Association of the State of Alabama.** Admiral Semmes Hotel, Mobile
April 21-23	**Otolaryngology for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
April 21-23	**Surgery of Hernia.** Cook County Graduate School of Medicine, Chicago
April 23	**Palo Alto Clinic Third Annual Symposia (Clinic and Palo Alto Medical Research Foundation).** Clinic Auditorium, Palo Alto
April 23	**Symposium on Pediatric Surgery.** University of California, San Francisco
April 23	**Washington State Obstetrical Association.** Portland
April 24-29	**John A. Andrew Clinical Society.** Tuskegee Institute, Alabama
April 24-30	**International Academy of Pathology.** Memphis
April 25-29	**Dermatology for the Internist.** University of Michigan Medical Center, Ann Arbor

April 25-27	**American Proctologic Society.** Shamrock Hilton Hotel, Houston
April 25-28	**Nebraska State Medical Association.** Hotel Cornhusker, Lincoln
April 25-29	**Course in General Surgery.** University of California, San Francisco
April 25-29	**Pediatric Surgery.** Cook County Graduate School of Medicine, Chicago
April 25-30	**American Academy of Neurology.** Eden Roc Hotel, Miami
April 26-28	**Connecticut State Medical Society.** Hamden High School, Hamden
April 26-29	**Industrial Medical Association.** Rochester, New York
April 27-29	**Middle States Public Health Association.** Indianapolis
April 27-30	**American College Health Association.** Toronto, Canada
April 27-30	**Fourth Postgraduate Course on Fractures and Other Trauma (Chicago Committee on Trauma of the American College of Surgeons).** John B. Murphy Memorial Auditorium, Chicago
April 27-30	**Sixth Biennial Cardiovascular Seminar (Florida Heart Association, Florida State Board of Health and Heart Assn. of Greater Miami).** Balmoral Hotel, Miami Beach
April 28-29	**Regional Postgraduate Institute (San Joaquin Valley Counties and University of Southern California School of Medicine).** Ahwahnee Hotel, Yosemite
April 28-30	**American Association of Pathologists and Bacteriologists.** Hotel Peabody, Memphis
April 28-30	**Valley Children's Hospital Spring Clinics.** Roosevelt High School Auditorium, Fresno
April 28-30	**Congenital Heart Disease (Deborah Hospital, Brown Hills, New Jersey).** Bellevue-Stratford Hotel, Philadelphia
April 28-30	**Southern Society of Anesthesiologists.** Washington, D. C.
April 28-May 1	**Annual Meeting, Hawaii Medical Association.** Honolulu
April 30-May 1	**Postgraduate Medical Symposium (University of California at Los Angeles).** Grossmount Hospital, San Diego
April 30-May 1	**Southeastern Dermatological Association.** Nashville
April 30-May 3	**North Dakota State Medical Association.** Dacotah Hotel, Grand Forks
May 1-2	**American Society for Clinical Investigation.** Haddon Hall, Atlantic City
May 1-4	**Medical Association of Georgia.** Columbus
May 1-4	**Oklahoma State Medical Association.** Oklahoma City
May 1-5	**Society of American Bacteriologists.** Bellvue-Stratford Hotel, Philadelphia
May 2	**American Federation for Clinical Research.** Chalfonte-Haddon Hall, Atlantic City
May 2-4	**Louisiana State Medical Society.** Capitol House, Baton Rouge
May 2-5	**Kansas Medical Society.** Baker Hotel, Hutchinson
May 2-6	**Intermediate Electrocardiography for General Physicians and Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
May 2-6	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
May 2-11	**Pan American Medical Association Congress.** National Auditorium, Mexico City, Mexico
May 2-13	**General Surgery.** Cook County Graduate School of Medicine, Chicago
May 2-13	**Internal Medicine.** Cook County Graduate School of Medicine. Chicago
May 3	**Anesthesiology.** University of Nebraska College of Medicine, Omaha
May 3-4	**Association of American Physicians.** Haddon Hall, Atlantic City
May 3-5	**Society of Pediatric Research.** New Ocean House, Swampscott, Mass.
May 3-5	**State Medical Society of Wisconsin.** Hotel Schroeder, Milwaukee
May 4	**Second Annual Scientific Symposium, Memorial Hospital of Long Beach.** Long Beach
May 4	**Trauma Day.** University of Nebraska College of Medicine, Omaha
May 4-7	**Arizona Medical Association, Inc.** Safari Hotel, Scottsdale, Ariz.
May 5-6	**American Pediatric Society.** New Ocean House, Swampscott, Mass.
May 5-7	**Pacific Northwest Society of Pathologists.** Vancouver, B.C.
May 5-7	**Valley Children's Hospital Spring Clinics.** Roosevelt High School Auditorium, Fresno
May 5-8	**Student American Medical Association.** Statler-Hilton Hotel, Los Angeles
May 6-7	**Management of Medical Emergencies.** University of California, Los Angeles
May 6-8	**International Congress of Phlebology.** Theatre Municipal de Chambery, Savoy, France
May 6-9	**American Psychoanalytic Association.** Chalfonte-Haddon Hall, Atlantic City
May 7	**Tacoma Surgical Club.** Tacoma
May 7-11	**North Carolina Medical Society.** Hotel Sir Walter Raleigh, Raleigh
May 7-13	**Medical Society of the State of New York.** Hotel Statler Hilton, New York City
May 9-11	**Aerospace Medical Association.** Americana Hotel. Bal Harbour, Florida
May 9-11	**Cardiovascular Diseases for General Physicians and Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
May 9-13	**American Psychiatric Association, Inc.** Hotel Traymore, Atlantic City
May 9-13	**Blood Vessel Surgery.** Cook County Graduate School of Medicine, Chicago
May 9-13	**Early Detection and Prevention of Disease (The American College of Physicians).** Phipps Institute Health Center, Philadelphia
May 9-14	**Hematology.** New York University Post-Graduate School, New York City
May 10-12	**Mississippi State Medical Association.** Hotel Heidelberg, Jackson
May 10-13	**New Mexico Medical Society.** Western Skies Hotel, Albuquerque
May 11-13	**American Association of Genito-Urinary Surgeons.** Dearborn Inn, Dearborn, Michigan
May 11-13	**American Association for Thoracic Surgery.** Deauville Hotel, Miami Beach
May 12-13	**Alcohol Intoxication and Influence (Western Reserve University Law-Medicine Center).** Cleveland
May 12-14	**American Association for Cleft Palate Rehabilitation.** Brown Palace Hotel, Denver
May 12-14	**Nevada Academy of General Practice, 1960 Annual Assembly.** Riverside Hotel, Reno
May 12-15	**Hawaii Medical Association.** Honolulu
May 13-14	**Portland Surgical Society.** Portland
May 14-17	**South Dakota State Medical Association.** Alonzo Ward Hotel, Aberdeen
May 14-18	**Medical Society of New Jersey.** Chalfonte-Haddon Hall, Atlantic City
May 15-18	**American Society of Maxillofacial Surgeons. Ambassador Hotel, Los Angeles**
May 15-18	**International College of Surgeons, International Congress.** Rome, Italy
May 16-18	**American Ophthalmological Society.** The Broadmoor, Colorado Springs
May 16-18	**Office Psychiatry for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
May 16-19	**American Urological Association, Inc.** The Palmer House, Chicago

(Continued on page lxxiv)



ECONOMIC TRENDS IN MEDICAL CARE

Medical care is rapidly becoming wonderfully effective and appallingly expensive.—Markley Roberts

For the past two years, the major portion of the program at the annual Congress on Medical Education and Licensure has dealt with the increasing problems in the supply and demand for medical care. In the present American scale of values, high reverence is held for life and health. Disease, pain and disability are increasingly regarded as avoidable, and death as postponable. These attitudes are reflected in the concept that a society can buy the level of health desired if it is willing to pay the price. Such expectations raise the problem of distinguishing between the needs for health and medical care, and the demands for such care. Needs may be large, or even infinite, but demand is a measure of financial ability and willingness to meet the needs.

The family is the typical consumer unit in the private demand for general health and medical care. The "average" family spends about 5 per cent of its income on such care. However, the real impact of medical care needs on the family budget appears not in average family spending but in the uneven incidence of sickness and disability, in the uneven distribution of medical charges and in the uneven abilities of families to pay the costs incurred. It would appear, in these days of installment buying and a growing tendency to overextend budgets, the American public is inclined to demand medical care exceeding its actual needs, as well as its ability to pay for luxury items such as private rooms, round-the-clock private nursing, etc.

A nationwide survey sponsored by the Health Information Foundation has indicated that 53 per cent of all families spent less than 5 per cent of their incomes on health items, and 8 per cent had no health or medical expenses at all during the year about which they were questioned. On the other hand, 2 per cent of all families incurred expenses exceeding 50 per cent of their incomes. Medical care needs clearly impose a major financial burden on low-income families. For them, large and unexpected medical care expenses can have a catastrophic impact on the family budget. Some indication of unmet medical care needs can be found in the pattern of rising family spending on medical care as family income increases. Total spending on health and medical care is approaching $25,000,000,000 per year, or about 5 per cent of the gross national product.

In October, 1959, the Surgeon General's Consultant Group on Medical Education (referred to as the Bane Committee) made a report on its findings.* Present trends, it found, indicate that population growth is outstripping the supply of physicians, the most important group supplying medical care to the American people. At present, we are running short of people in the production age group. During the next 15 years, it is predicted, the number of children will increase 15 per cent, and the number of old people will increase 40 per cent. Since 1949, according to the same authority, the ratio of M.D.'s to total population has declined from 135 to 132 per 100,000, in spite of a numerical increase from 201,000 to more than 227,000 physicians.

There are several reasons for the shortage of physicians. (1) The national totals fail to reflect the numbers of physicians retired or partially retired. (2) It is estimated that 3,200 physicians are needed for the care of the mentally ill alone. (3) There is an alarming need for professors in existing medical schools. (4) There is an increasing demand for physicians in industry. (5) Group and specialty practice has made inroads upon the general practice of medicine. (6) Physicians cannot be expected to work longer hours.

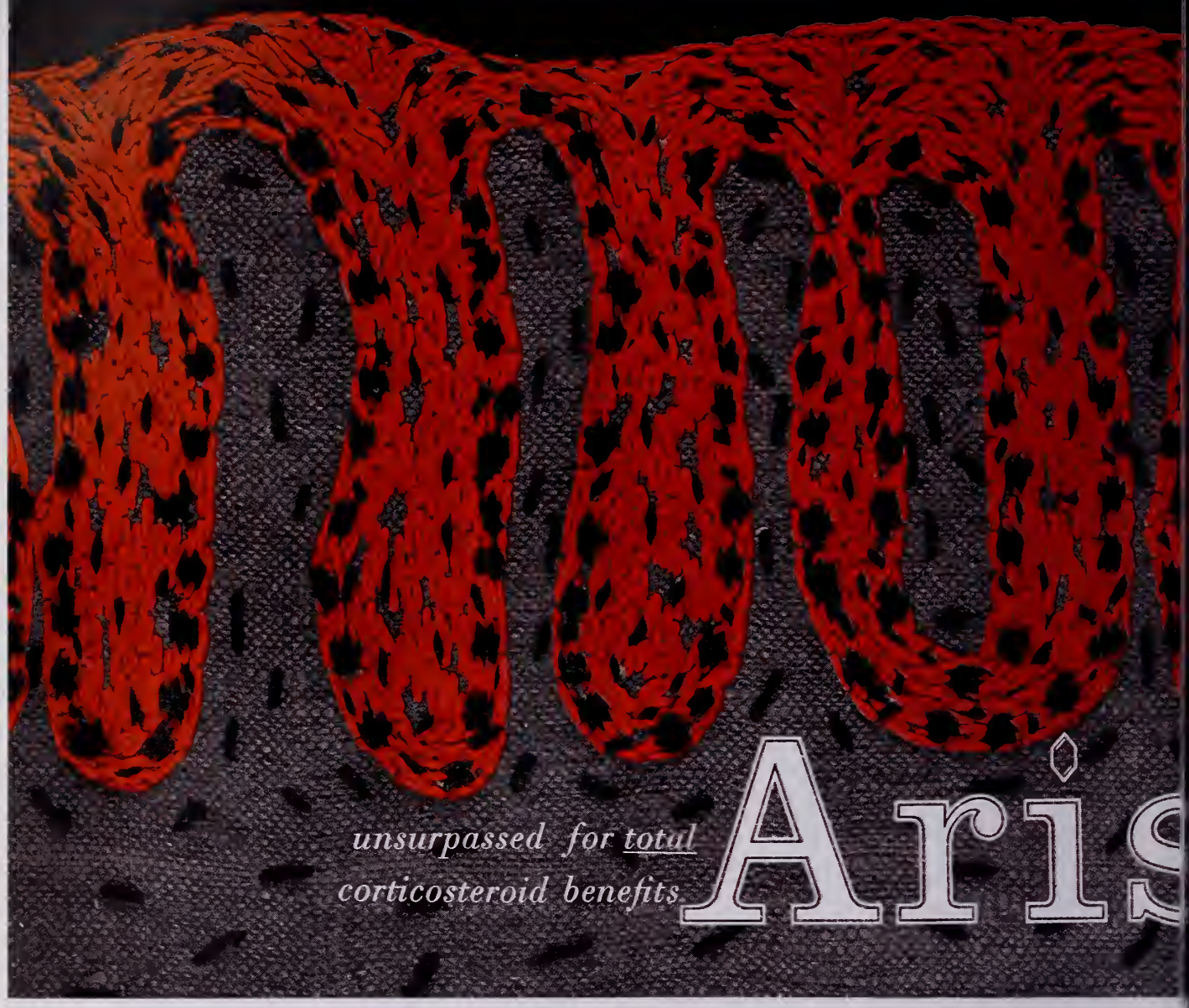
In 1959, about 6,900 medical students were graduated from medical schools. The output of physicians will have to expand to 11,000 graduates per year from medical schools in the U. S., plus another 750 from foreign medical schools, if the 1957 ratio of 132 physicians per 100,000 population is to be maintained in 1975.

There are currently 81 four-year medical schools averaging 90 graduates yearly, and there are four two-year medical schools. We all realize that it takes years of effort to prepare the necessary teaching material such as specimens, slides and cadavers to do a proper job of teaching, and this element alone will make it difficult for the existing medical schools to enlarge their student bodies appreciably. Even more important is the difficulty they are already encountering in attracting sufficient numbers of young men and women with stable personalities and first-rate minds. But the fact remains that the nation must have increasing numbers of doctors to care for its rapidly increasing numbers of citizens.

Since the attrition rates in the four-year medical schools result in an under-utilization of existing clinical facilities during the final two years of medical education, the graduates of the two-year medical schools can provide the additional stu-

* PHYSICIANS FOR A GROWING AMERICA, REPORT OF THE SURGEON GENERAL'S CONSULTANT GROUP ON MEDICAL EDUCATION. Public Health Service Publication No. 709. (Washington, D. C., U. S. Government Printing Office, 1959. 60 cents).

in allergic and inflammatory skin disorders (including psoriasis)

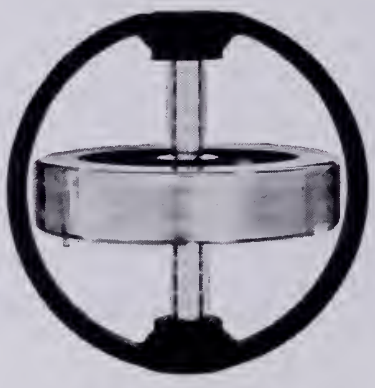


unsurpassed for total corticosteroid benefits

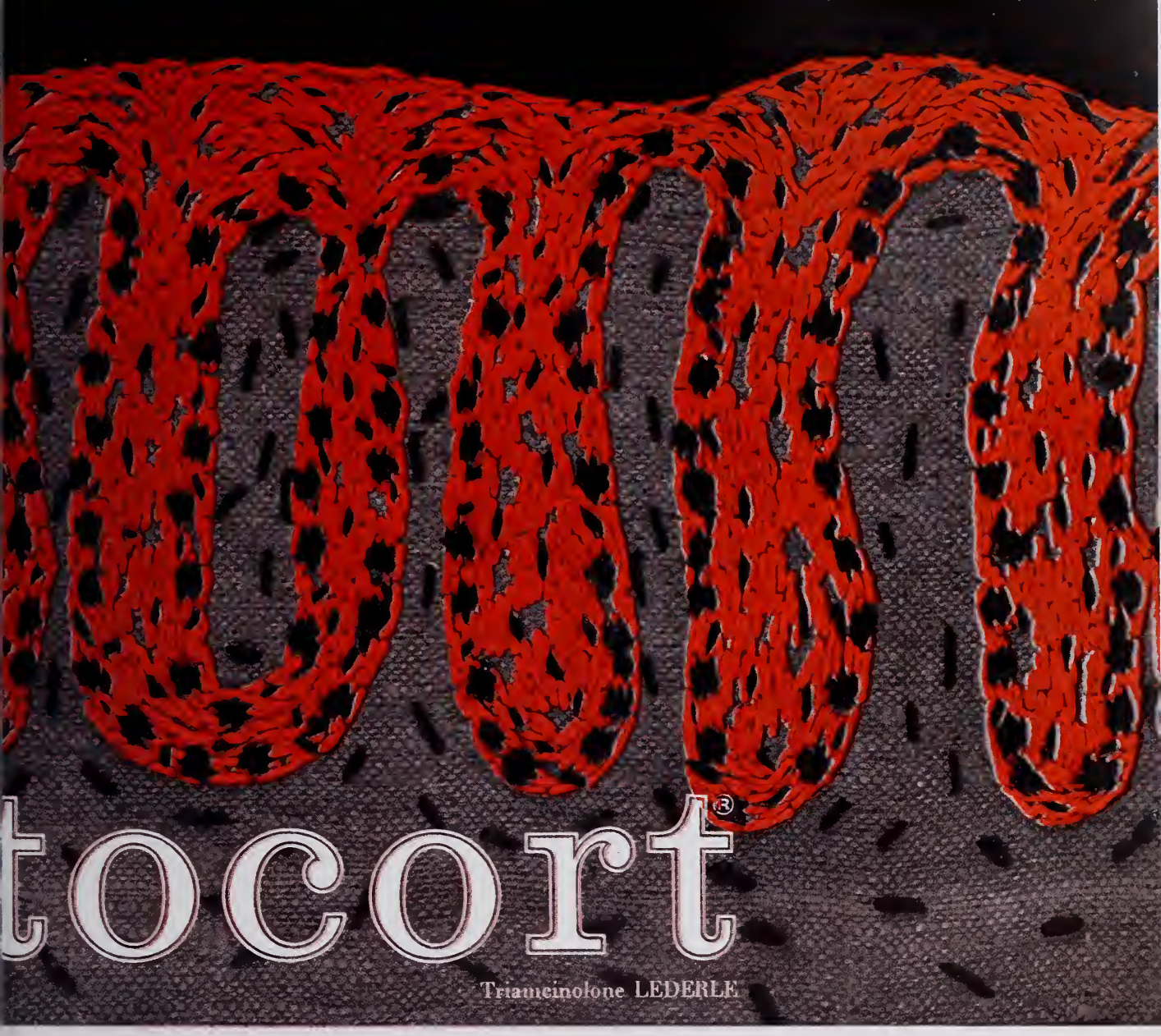
Aris

Substantiated by published reports of leading clinicians

- **effective control** of allergic and inflammatory symptoms[1-3,7,8,12-15,17,18]



- **minimal disturbance** of the patient's chemical and psychic balance[1,4-18]



At the recommended antiallergic and anti-inflammatory dosage levels, ARISTOCORT means:

- **freedom from salt and water retention**
- **virtual freedom from potassium depletion**
- **negligible calcium depletion**
- **euphoria and depression rare**
- **no voracious appetite — no excessive weight gain**
- **low incidence of peptic ulcer**
- **low incidence of osteoporosis with compression fracture**

Precautions: With ARISTOCORT all traditional precautions to corticosteroid therapy should be observed. Dosage should always be carefully adjusted to the smallest amount which will suppress symptoms.

After patients have been on steroids for prolonged periods, discontinuance must be carried out gradually over a period of as much as several weeks.

Supplied: 1 mg. scored tablets (yellow); 2 mg. scored tablets (pink); 4 mg. scored tablets (white); 16 mg. scored tablets (white).

Diacetate Parenteral (for intra-articular and intrasynovial injection). Vials of 5 cc. (25 mg./cc.).

References: 1. Feinberg, S. M.; Feinberg, A. R., and Fisherman, E. W.: *J.A.M.A.* 167:58 (May 3) 1958. 2. Epstein, J. L., and Sherwood, H.: *Conn. Med.* 22:822 (Dec.) 1958. 3. Friedlaender, S., and Friedlaender, A. S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958. 4. Segal, M. S., and Duvenci, J.: *Bull. Tufts N.E. Medical Center* 4:71 (April-June) 1958. 5. Segal, M. S.: Report to the A.M.A. Council on Drugs, *J.A.M.A.* 169:1063 (March 7) 1958. 6. Hartung, E. F.: *J. Florida Acad. Gen. Practice* 8:18, 1957. 7. Rein, C. R.; Fleischwager, R., and Rosenthal, A. L.: *J.A.M.A.* 165: 1821 (Dec. 7) 1957. 8. McGavack, T. H.: *Clin. Med.* (June) 1959. 9. Freyberg, R. H.; Berntsen, C. A., and Hellman, L.: *Arthritis & Rheumatism* 1:215 (June) 1958. 10. Hartung, E. F.: *J.A.M.A.* 167:973 (June 21) 1958. 11. Zuckner, J.; Ramsey, R. H.; Caciolo, C., and Gantner, G. E.: *Ann. Rheumat. Dis.* 17:398 (Dec.) 1958. 12. Appel, B.; Tye, M. J., and Leibsohn, E.: *Antibiotic Med. & Clin. Ther.* 5:716 (Dec.) 1958. 13. Kalz, F.: *Canad. M.A.J.* 79:400 (Sept.) 1958. 14. Mullins, J. F., and Wilson, C. J.: *Texas J. Med.* 54:648 (Sept.) 1958. 15. Shelley, W. B.; Harun, J. S., and Pillsbury, D. M.: *J.A.M.A.* 167:959 (June 21) 1958. 16. DuBois, E. L.: *J.A.M.A.* 167:1590 (July 26) 1958. 17. McGavack, T. H.; Kao, K. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958. 18. Council on Drugs: *J.A.M.A.* 169:257 (January) 1959.

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dents to help use the existing clinical facilities. There are also experiments under way to shorten premedical training and speed up the process of medical education.

However, even with such trends operating, between 20 and 24 new medical schools will have to be instituted to maintain the ratio of 132 physicians per 100,000 population, and to meet research and educational needs. Such an ambitious program, requiring about $1,000,000,000 for the construction of new medical schools, may well require substantial federal aid.

Without the large number of foreign-trained physicians who now are serving the American people, the physician-population ratio would have declined more sharply in the past 15 years. More than 10 per cent of new physicians since 1950 were educated outside the United States. Four hundred of these 1,300 foreign medical school graduates were American citizens who had studied abroad. The remainder were aliens. In 1958, no fewer than 7,800 graduates of foreign medical schools were added to the total supply of physicians in this country. There were 4,800 foreign-trained internes and residents employed in the United States in 1959. This year the Educational Council for Foreign Medical Graduates will hold examinations in this country for 4,200 physicians in March, and 1,800 more foreign graduates will take the same examinations overseas. This would represent the output of 10 to 15 medical schools. Such dependence on foreign-trained medical doctors substantially indicates an inadequate output of physicians by American medical schools.

The financial burden imposed by a medical school on its parent university is a critical item that no university president can overlook. In return, the stature of the medical school and the concomitant enhancement of the stature of the university are ill-defined but highly desirable assets that no university president dares ignore. There are several outstanding American universities which are better known for their medical schools than for any of their other colleges, fine as the others may be.

The numbers of applicants to medical schools continue to drop, although the number accepted in 1959-1960 is up to 8,155, as compared to 8,129 in 1958-59, and 8,005 in 1957-1958. The number of individuals who applied for admission in 1957-1958 was 15,917; and in 1958-1959 it was 15,170. Indications suggest that the number for next year will be even lower. However, a study made by the American Association of Medical Colleges revealed that the mean score in the required medical college admission test is six points higher this year. (This test measures quantitative aptitude and science achievement.) Even more encouraging was the finding that the test scores of accepted applicants were significantly higher than those of the applicant group as a whole, and equal or superior to those of previous classes when applicants were more numerous.

Many reasons have been advanced for the qualitative and quantitative declines in medical school applicants. Increased competition for the high caliber student by such fields as avionics and engineering has been significant. Many of these students show a willingness to step into jobs paying $15,000 to $20,000 per year, rather than face the financial strain of an internship and perhaps a residency following graduation from medical school. Other factors which undoubtedly operate are the length of basic training and subsequent demands of specilization, the difficulty of the curriculum, and especially the high cost of medical training.

The current estimate of the cost of training a general practitioner is $47,000, and of training a specialist, $67,000, exclusive of basic living expenses. The problem becomes more acute when it is evident that only 40 per cent of this year's medical school seniors come from families with incomes of $10,000 or more. It is quite obvious that a large percentage of medical students are necessarily going to have to receive financial help from some source other than their parents. The majority of them have had to borrow money, and many of them have had to borrow it in substantial amounts. Of the 1959 medical school graduates, 52 per cent were in debt, and 6.5 per cent of them in amounts exceeding $10,000. Out of 6,799 graduating students, 2,257 owed a total of $12,450,786 and had total assets of $2,841,716. The average indebtedness was $4,258 per student. The average of annual expenses for a married medical student is $3,417; for a single student, $2,136. These costs indicate that tuition, fees, books, instruments and supplies are roughly equal for both, but room, board and miscellaneous living expenses are roughly twice as much for the married student as for the single.

The Surgeon General's Consultant Group on Medical Education has made the following recommendations to alleviate these conditions:

1. *Private support for low-cost loans and scholarships, and federal grants-in-aid for needy medical students.* Aggressive support should be continued through such groups as the National Fund for Medical Education and the American Medical Education Foundation. The restrictions on many of the loan and scholarship funds currently available should be eliminated or at least modified. You will recall that, on several occasions, it has been suggested that each physician contribute $100 annually so as immediately to create a fund of more than $20,000,000. Such a fund would go a long way in assisting needy medical students. At least several state medical societies have made annual assessments for AMEF. The ISMS Educational Loan Fund has done an outstanding job of aiding worthy students.

2. *Establishment of new medical schools and expansion of existing medical schools.*

3. *Reconsideration of unreasonably restrictive medical school admission policies.* Here in Iowa, as you know, preference for admission to the S.U.I. College of Medicine is given by law to a preponderant percentage of Iowa residents. This regulation has been somewhat of a handicap in recent years in regard to the qualitative factor of the applicants.

4. *Continuing appraisal of the length and content of medical training, including evaluation of experiments at shortening the training period.*

5. *Increased public and private support for the basic operations of medical schools.*

6. *Federal matching grants for construction and expansion of medical schools and teaching hospitals.*

7. *Public and private efforts must be concentrated upon recruiting candidates for careers in medicine and related health services.*

If we are to separate ourselves from those who say, "It can't be done," or "It's too expensive," or "Let Uncle Sam do it," we must start now to arrange the financing of the medical school class of 1975 and of those that follow!

CHLOROTHIAZIDE RE-VISITED

Since a previous editorial on this substance in this JOURNAL in December, 1958, chlorothiazide has continued to be a valuable tool for physicians. Because many publications have appeared concerning it and because many structurally-similar compounds have been developed recently, it is of interest to reconsider this drug two and one-half years after its introduction to the medical profession.

Most of the new thiazide compounds (chlorothiazide and its congeners) have a structure in which either the double bond in the benzothiadiazine ring has been opened (the dihydro preparations) or there has been substitution of fluorine for chlorine ions at the six position on the benzene ring (flumethiazide group). All preparations appear to act as does chlorothiazide with a weak carbonic anhydrase inhibiting effect as well as a separate effect on the proximal convoluted tubules of the kidney to cause the rejection of sodium.

The new compounds stimulated particular interest because of the hope that they might prevent the excessive loss of body potassium which is sometimes seen with chlorothiazide. Despite occasional optimistic reports, satisfactory evidence has not been presented to demonstrate that any of the derivatives do indeed cause less kaluresis. Most investigators screening these diuretics believe that potassium loss is essentially the same with all of them despite wide differences in mg./kg. responses and that their final action at effective levels is practically identical.

Wide clinical use has substantiated the initial observation of the potency and continued diuretic efficiency of these drugs over prolonged periods. Their tendency to cause potassium loss creates certain problems in patients with edema from cardiac and liver diseases, who often are potassium-depleted prior to therapy. A rapid loss of fluid after treatment enhances the potassium loss in these patients. This deficiency may be manifested by evidence of digitalis toxicity, by other signs of acute hypokaliemia or by hepatic coma and represents one major problem of therapy with thiazide compounds. Mercurials, on the other hand, cause relatively less potassium loss and, since they are most effective by injection, are not so often responsible for depletion of this electrolyte.

Hypokaliemia is less frequent and is usually asymptomatic in patients *without* edema treated with thiazide derivatives. The problem of giving routine potassium supplementation to such patients on long-term thiazide therapy has not been resolved. It is agreed, however, that if the serum potassium falls below 3 mEq./liter or if symptoms consistent with hypokaliemia occur, extra potassium should be supplied. The low serum potassium observed certainly may be harmless and may reflect only the mild increase in serum CO_2 content usually present. Studies of exchangeable potassium in these patients show that this component of the body potassium falls sharply when chlorothiazide is started but tends to return to its original value in one to two months, despite continuous treatment. After therapy is completed, exchangeable potassium returns to values greater than those of the control period.

Chlorothiazide causes retention of uric acid and results in increases in the serum uric acid and in the miscible pool of this substance. Many patients have developed gouty arthritis while taking this drug; however, it is believed that they had subclinical gout before drug administration. A question of great practical importance is whether the increase of body uric acid which occurs after thiazide treatment will cause clinical gout in patients not so disposed. Such a development or likelihood would place limits on chlorothiazide therapy which we do not recognize currently. Uricosuric agents such as probenecid (Benemid) will prevent thiazide-induced accumulation of uric acid.

Despite these reservations, chlorothiazide continues to be a valuable antihypertensive agent, especially when used with other hypotension-producing drugs. Although the mechanism by which it lowers blood pressure remains doubtful, most interest centers on the possibility that electrolyte redistribution causes lessened vascular reactivity and lower peripheral arterial resistance. It has known effects on the venous circulation and cardiac output, as well as, acutely, on body water com-

partments which would explain its hypotensive properties.

Relatively few other significant side or toxic reactions to chlorothiazide have developed. Purpura, usually of a non-thrombocytopenic variety, has been observed several times and a wide variety of skin rashes may occur. The drug interferes with carbohydrate metabolism in some diabetic patients, causing hyperglycemia, increased glycosuria and greater need for insulin. This effect is reversible when the thiazide is stopped.

Two and one-half years' trial has not answered many important questions concerning the action of this interesting group of compounds. They have proved to be relatively non-toxic and they are effective for prolonged periods. Perhaps some of their side effects will be of greater importance as time goes on and will limit their usefulness, but at the moment the drugs play a vital role in the treatment of patients with edema and high blood pressure.

AMA READY TO ENFORCE POLICY ON FOREIGN M.D.'S

The American Medical Association has put some punch into its policy requiring all foreign medical school graduates in approved U. S. hospital intern and residency programs to be certified by the Educational Council for Foreign Medical Graduates (ECFMG). Under the new policy, which goes into effect on July 1, hospitals face disapproval of training programs if they keep foreign interns and residents on staff who do not meet at least one of the following requirements:

(1) Hold a temporary appointment—not more than six months—based on acceptance for the September qualifying examination; (2) have a standard or temporary ECFMG certificate based on performance in a previous examination; (3) be in the final six months of training; or (4) hold a full state license.

TWO EXAM DATES

For those now in training, the AMA, through its Council on Medical Education and Hospitals, has given a six-month extension by moving from July 1 to December 31, 1960, the final date for qualification. Dr. Walter S. Wiggins, secretary of the Council, pointed out that this gives the foreign trainees two shots at passing the exam—March 16 and sometime in September.

Concerning the September 1960 examination, the AMA Council explained that the law requires institutions to notify the Immigration and Naturalization Service of any change in appointment status—such as failure in the exam—of students on exchange-visitor visas.

By December 31, all foreign graduates under the exchange visitor set-up must have an ECFMG certificate or a state license, since training as intern or resident must be in an approved program. It can be assumed that almost all others will return home.

The new policy requires foreign graduates not now in the country to pass their qualifying test at home before they can obtain the U. S. hospital position required for entrance into this country. In the past, persons taking the examination overseas did not do so well as those taking it here.

With regard to the ECFMG exam on March 16, Executive Director Dean F. Smiley said a total of 7,300 foreign graduates have been accepted. He estimated that 6,500, including 5,000 who are now in the U. S., will actually take the test. Based on previous results, he predicted that two-thirds of those here will pass—half with standard, half with temporary certificates. Those scoring 75 or over receive the standard certificate; a 70-75 mark allows a temporary certificate good for six months.

ANNUAL UNIVERSITY ISSUE

As is customary each April, the faculty members of the S.U.I. College of Medicine have provided all of the scientific articles that appear in this issue of the JOURNAL. With a single exception, these contributions compose a symposium on hypertension, and quite opportunely, the clinical pathologic conference report concerns a hypertensive patient.

In addition to the "Scientific Articles" section, and the dean's message and elegiac essays that precede it, we want to call our readers' attention to Dr. Preston Brown's fine critical review of the S.U.I. Department of Obstetrics and Gynecology that appears under the heading "Medical History" on pages 229-233.

On behalf of all members of the Society, we thank the faculty members for spending a great deal of their valuable time in preparing these articles, and offer special thanks to Dr. David Culp and his committee for doing the administrative chores that are essential to presentations of this sort.

ISMS Annual Meeting note—

Iowa Academy of General Practice
Cocktail Party
6:00-8:00 p.m., April 25
Savery Hotel

For general practitioners, their wives and their friends

President's Page

In this last message of mine as president of your Society, I have news to give you which is heartening to me and which I think will be well received by the profession.

Last spring, I appointed the Policy Evaluation Committee to study Blue Shield proposals, with the understanding that this Committee would present its final report to the House of Delegates in April, 1961. However, through the cooperation between the Policy Evaluation Committee and the officials of Blue Shield, progress has been made this first year. It now appears that Blue Shield will be in position to improve its Senior 65 program by increasing the value of the unit allowed under the plan from $2 to $3 without at the same time increasing the premium. I am pleased to report that the insurance commissioner has approved this change.

I know that without this change, many physicians have been experiencing financial losses. This alteration should make the special plan for the aged more acceptable to the profession, and at the same time maintain and increase its effectiveness as a part of medicine's alternative to Forand-type legislation.

John W. Billingsley

President

Progress Report
ISMS Policy Evaluation Committee

Nothing in the accompanying progress report is to be interpreted as a definite recommendation of the Policy Evaluation Committee.

The report reviews the data that have been presented to the Committee, and contains a few of the Committee's impressions but no definite conclusions.

A copy of this report will be included in the folder of materials sent to each member of the ISMS House of Delegates in advance of the 1960 Annual Meeting.

WENDELL L. DOWNING, M.D., *Chairman*

THE HOUSE OF DELEGATES of the Iowa State Medical Society in 1959 recommended, in brief: "That the Blue Shield Senior 65 and Middle Income Contract (B400) be considered as pilot programs for a period of two years; at the end of one year a Progress Report shall be presented to the House of Delegates as to the functioning of these programs, with a re-evaluation at the end of two years."

In June, 1959, Dr. J. W. Billingsley, president of the Iowa State Medical Society, on recommendation of the Board of Trustees, appointed a special Policy Evaluation Committee, with its first assignment a study of Blue Shield. On this Committee, eight members were selected to represent the different specialties and the Academy of General Practice. The members chosen were thought to be equally divided between those for and those against present Blue Shield policies. The three other members were a chairman and the ISMS president and president-elect as ex-officio members.

In July, an organizational meeting was held; in August, two meetings were held to which representatives of the specialty groups and the I.A.G.P. were invited to "present their cases" for and against. Following these meetings, much additional information was compiled relating to Iowa Medical Service and health insurance in general. On February 17, 1960, a fourth meeting was held, and current data were received from Blue Shield.

For the purpose of providing information, the following summary has been prepared, which includes facts, figures, general information, alternate plans, etc. This Committee Progress Report, while in summary form, will show you many facets of the Blue Shield problem.

STUDY OF IOWA MEDICAL SERVICE (BLUE SHIELD)

Facts.

1. Blue Shield is a voluntary, non-profit, service company licensed by the State of Iowa, with a requirement that full service be a major part of the contracts provided.

2. Blue Shield was organized in 1945. The profession entered the insurance field to promote health and accident insurance coverage especially for persons of modest income, and to combat an attempt to socialize medicine through the Murray-Wagner-Dingell Bill.

3. Blue Shield is sponsored by the Iowa State Medical Society. Membership is made up of participating physicians (members of the ISMS).

4. Blue Shield is a third party between individual physicians and the patient, but of all third parties it is the most understanding and sympathetic toward medicine because its policies are medically made.

5. Prepayment plans are continually increasing in the United States.

6. Blue Shield policies are made by:

 a. House of Delegates of the ISMS.

 b. Executive Council of the ISMS between meetings of the House (the Executive Council consists of 22 Society officers, and two delegates-at-large from the Blue Shield Board of Directors).

 c. Board of Directors of Blue Shield, made up of 20 physicians (active ISMS members), and five lay members (business and actuarial representatives), including three directors nominated by the ISMS.

7. Original and subsequent plans have been offered by Blue Shield to provide full service to a low income group, as indicated, with accompanying increases in Blue Shield allowances.

 a. In 1945, full service to families with incomes less than $2,500 and individuals with incomes less than $1,800. Reportedly 65 to 70 per cent of the population were eligible.

 b. In 1950, maximum family income for full service was raised to $3,000 and individuals to $2,000.

 c. In 1953, maximum family income for full service was raised to $3,600 and individuals to $2,400.

 d. The 1959 raise in maximum family income limit to $5,400 and individuals to $3,600 was reported to take 46 per cent of Iowa population into eligibility, but with a 33 per cent increase in fees allowed for care of the $5,400 income limit group.

SOCIO-ECONOMIC CHANGES AFFECTING VOLUNTARY HEALTH INSURANCE

1. Labor's goal has become total medical coverage, with varying contributions by employer and employee. (See Legislative Committee Report, 1959, and note labor union actions.)

2. The American public has become increasingly insurance-conscious (life, home, car, theft, fire, disability). A larger and larger segment now wishes health insurance coverage, either voluntary or federal. Health care has come to be considered a right, rather than a privilege.

3. The American family now budgets most major expenses, e.g., home, cars, appliances.

4. The family income has probably increased in dollars in an amount equal to the devaluation and the rise in the cost of living.

5. Physician fees vary with location, urban or rural, and type of practice, and vary individually.

Questions:

a. Do most physicians charge more than Blue Shield allowance to an uninsured patient in the low income group?

b. In what percentage of cases with Blue Shield coverage does the patient accept the Blue Shield as indemnity and pay the difference?

c. In what percentage of cases with Blue Shield coverage does the patient demand full service coverage?

BLUE SHIELD IN IOWA AND THE NATION

1. *Its effect on Iowa medicine.*

a. It has set the pattern and stimulated the growth of commercial health insurance. It "is a powerful voice which helps to control and guide future development in the health insurance field." It has made available an insurance plan for a low income group to obtain major medical coverage.

b. Commercial insurance companies are not now able to cover the health insurance field, or take up the slack if Blue Shield were eliminated. "At present, commercial insurance companies could not handle the volume of business"—their own statement. Blue Shield covers a segment of the population which commercial companies cannot reach at present.

c. Many feel that the advent of federal medicine would be more likely if Blue Shield were no longer available nationally.

2. *Advantages of Blue Shield full service for the low income group.* (Note: Full service covers only a portion of the services rendered a patient by the doctor. Office and house calls and diagnostic services are not covered.) It does provide coverage, at a reduced fee, for the low income group otherwise unable to obtain it.

3. *Disadvantages of full service brought out in Committee.*

a. It is difficult to determine income level, or eligibility for full service.

b. Reduced fees lower the quality of service.

c. No differential is provided for the better trained physician and the more intensive and detailed care he provides.

d. The insurance company must do the policing.

e. The individual physician is not able to set his own fees.

f. The doctor is working for the insurance company instead of the patient.

g. The patient thinks the insurance company, rather than the doctor, is forgiving the difference.

SHOULD BLUE SHIELD CHANGE TO A STRICTLY INDEMNITY PROGRAM?

1. In Iowa, such a change in concept would be a radical one.

2. Blue Shield would then be just another insurance company.

3. Such a change would necessitate an alteration in the philosophy either of the Iowa Insurance Commissioner or of the General Assembly, or both.

4. The indemnity field now (14 years later) is fairly well covered by commercial insurance companies.

5. Blue Shield would then return a much smaller per cent of premiums to the subscribers, losing its tax advantage reported to be 3 per cent of gross premium income annually.

6. Even so, Blue Shield would probably return more to the subscribers, because of its non-profit advantage.

7. *Question:* At the present stage of development of commercial health insurance, what is the ethical and moral position of medicine? Would an indemnity plan sponsored by Iowa medicine be justifiable?

INDEMNITY PLANS ACROSS THE NATION

1. *Commercial*—115 companies offer major medical expense insurance on an individual basis: 159 companies offer major medical expense on a group basis.

In 1958, according to the Accident and Sickness Review of 1959 by the National Underwriters, these companies paid back to policyholders in benefits 71.2 per cent of total premiums paid. (Note: Mutual Benefit of Omaha paid 62.2 per cent.)

Before Blue Shield, commercial companies had competition only among themselves. Policies were more or less standard. With the advent of medically sponsored and approved plans, there has evolved a general expansion of coverage offered by private companies. Thus, Blue Shield full service and indemnity plans influence both premium

rates and coverage benefits offered by commercial companies.

2. *Medical society approved plans across the nation (Blue Sheld) in 1958.*

17 plans offered only indemnity coverage, 22 per cent of the total number of plans.

55 plans offered a combination of indemnity and service, 70.1 per cent of the total, and

5 plans offered service plans only, or 6 per cent of the total.

FULL SERVICE PLANS ACROSS THE NATION

1. Maximum limits of eligibility for full service:

In 35 states the maximum is above $5,000.

In 34 states the maximum is above $6,000.

In only 16 states is the maximum under $5,000.

2. On the average, these plans return to the subscriber, in benefits, 89.9 per cent of premium income, with a high of 97.6 per cent and a low of 70.7 per cent. Iowa Medical Service's most recent figure is 89.7 per cent. The average of administrative costs for all plans in this category is 9.4 per cent and for miscellaneous expenses 2.8 per cent.

3. Thus, subscribers benefit from medically sponsored plans (non-profit), receiving back 87.8 per cent of premiums paid as against 71.2 per cent for commercial, a difference of 16.6 per cent.

4. Some indemnity plans in the Blue Shield group recommend, but do not require, "that physician members accept the benefits paid under the sponsored policies as full payment of their fees for service rendered patients in the low income group."

GENERAL COMPLAINTS AGAINST 1959 ACTION

1. *Too hastily put through.*

The following is a listing of information available to members in recent years:

a. Articles in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

b. County officer and district meetings, 1956, 1957, 1958.

c. News letters and bulletins.

d. Pronouncements of AMA House of Delegates.

e. Information packets to members of ISMS House of Delegates prior to February, 1959, meeting.

f. Reference Committee hearings and House discussions.

Although information was made available to the members of the House of Delegates, on the proposed changes, prior to its 1959 meetings, time apparently did not permit consideration by the entire membership. Feeling that wider opportunity for familiarity and study of the problem is advantageous, the Committee directed that this Progress Report be published in the April ISMS JOURNAL, as part of a concerted effort to make it available to each and every member.

The April, 1959, action called for interim evaluation at end of one year, and reevaluation at end of two years.

2. *Do lower than customary fee schedules set a pattern for the government to adopt?*

Medicare experience, and all lesser government schedules, prove that "all government programs are negotiated" on usual fees at that place and time.

Only the unit value, which is variable, sets the fees.

Reduced fees for low income group probably have little effect on physicians' usual and reasonable fees.

3. *Inequities existing in the Blue Shield Fee Schedule are aggravated by the 1959 Program.*

Internists and pediatricians are entitled to higher charges for medical patients than most other physicans (more training, more detailed services, more time expended per average case). These specialists have no access to higher surgical fees to take up the slack.

Question: Could, or should, Blue Shield provide a higher fee schedule for the medical care provided by these groups, and on what basis—unit value raise or higher number of units?

A committee of the American Society of Internal Medicine, after studying this differential problem in connection with Medicare, announced that "after prolonged study . . . [the members] agreed that such a procedure was not feasible."

A New York Blue Shield plan is the only one providing a differential fee schedule for specialty services. The problem, or one of them, is to set up fair criteria for eligibility for the higher schedule. Suggestions are: (1) certification by specialty boards, (2) membership in a specialty group, and (3) five or more years' limitation of practice and recognition by colleagues as a specialist.

4. *Specific complaints of pediatricians.*

a. Allowance for preparing child for surgery is inadequate and unfair in relation to surgical fee.

b. Complicated cases (e.g., dehydration) carry inadequate medical fees.

c. The $5,400 family income limit for full service discriminates against pediatricians. They estimate this limit includes 80 per cent of families with children.

Note: Successive modifications of fee schedules, culminating in the IOWA RELATIVE VALUE STUDY (Grey Book) have removed many inequities.

Note: There is a possibility that surgery fees for full service still are too high in relation to medical fees.

5. *Why did the Reference Committee and the House of Delegates combine the Senior 65 and the $5,400 plans at the February, 1959, meeting?*

a. At that time, the Senior 65 plan premium was so figured that it was to be subsidized by the $5,400 plan. (Premium calculated so that income would meet outgo but would not allow additions to the contingency fund.) In the

interim, February to April, 1959, the Insurance Commissioner ruled that each policy must stand on its own fiscal soundness, and thus the premiums had to be recalculated to meet this requirement.

b. In 1956 and 1957 Blue Shield lost subscribers due to restriction of market; the appeal of full service became attractive to smaller and smaller numbers. The loss in 1956 was $56,000 and would have been $242,000 if the contingency fund requirement had been met. The ISMS House of Delegates took no constructive or corrective action in 1957, other than to recommend continued study.

c. In 1958, the Blue Shield financial situation improved to the extent that, for the first time in two years, funds were added to the contingency reserve ($110,000, see Annual Report).

6. *Listing of objections to Blue Shield by doctors who have resigned.*

a. Object to full service.

b. Object to any third party, including Blue Shield.

c. The $5,400 income level too high; covers too great a segment of population.

d. Object to having fees set, even by Blue Shield.

e. Doctors shouldn't be in the insurance business.

f. Doesn't permit mileage allowance, doctor to hospital.

g. Senior 65 is a political maneuver, not an economic aid to the elderly; most Iowans over 65 are already being cared for.

h. Refuse to attempt the determination of patient's income and net worth.

i. In 1959 there were 2,265 participating physicians. Since April, 1959, 200 doctors have resigned, effective within 30 days, and 28 have resigned, effective at the end of 12 months. Ten doctors who resigned have since rejoined. One hundred-three doctors signed participating agreements in that period.

SENIOR 65 PLAN

1. *It seems self-evident from all reports and information available that medicine had to act in 1959 to provide for the senior citizen.*

a. The AMA House of Delegates, in December, 1958, reported it urgent that programs be developed.

b. By March, 1960, almost all Blue Shield groups had plans in effect or in process of being developed.

c. Nationally, the need to provide for the senior citizen with low income is probably greater than in Iowa.

d. In addition to actual need, there is the political angle. Politicians are using the appeal of the need, real and imagined, to get votes.

e. Forand-type legislation is imminent. See news bulletin on House Ways and Means Committee Hearings on Forand Bill. The year 1960 is an election year. Forand legislation is a natural political issue. Thirteen million persons 62 and over are now eligible for Social Security benefits. Seventy per cent of persons 65 and over are now receiving payments through the Social Security retirement and disability programs, at a cost of 14 billion dollars (estimated) in 1960.

2. *Iowa Figures.*

a. 307,000 people 65 and over in Iowa.

b. 45,000 are estimated to have sufficient funds so as not to be interested in insurance.

c. 180,000 can afford to buy ordinary health insurance, and of these, 60,000 now have Blue Cross-Blue Shield in some form.

d. 45,000 of the 82,000 remaining are eligible for indigent care.

e. 37,000 remain and of this group 7,900 have bought the Senior 65 and 20,000 are estimated to have Continental Casualty or Mutual of Omaha coverage.

Note: Based on the above figures, and on consistent figures for the Blue Shield proportion of the total over-all market, it is carefully estimated that not more than 20,000 Senior 65 policies could be sold.

3. Two dollars per unit (Grey Book) constitutes full service for couples 65 and over with incomes of $3,000 or below and net worth of $30,000 or below. It has been suggested that the net worth figure is too high.

4. *Propaganda Value.* In addition to providing service for the low income groups at a cost its members can afford, there is value in the program in disproving the necessity of Forand-type legislation. Medicine is not always *against*—here is something it is *for*. Blue Shield has had many letters expressing appreciation to doctors, hospitals and Blue Shield for providing the Senior 65 coverage.

5. *Blue Cross.* The matching Senior 65 Blue Cross policy has been reduced to 100 per cent of cost as against 105 per cent of cost of ordinary policies. Income limits are the same as for Blue Shield. Blue Cross has a deductible feature: $25.00 first day, and $3.00 each day thereafter.

6. *Laboratory and x-ray allowances.* Blue Shield Senior 65 now pays $3.00 per unit, as against $2.00 for other practices. This is believed to be proportionate to the higher overhead costs. The problem comes in connection with previously determined agreements between radiologists and pathologists and the hospitals in which they work. Some hospitals at present accept their agreed proportion of the $3.00 per unit charge. Others take it all, and a few even insist that the doctor make up the difference. The problem is aggravated by the fact that some hospitals hold that they have no commitment to furnish full service to eligibles in these two specialties. It should be pointed out, however, that radiology and pathology claims under the

Senior 65 in any single hospital are few in number.

If Blue Shield experience were found to justify an increase in fees from $2.00 per unit to $3.00 for regular practices, with appropriate adjustments in radiology and pathology fees, this problem would be eliminated.

DEDUCTIBLE AND CO-INSURANCE

1. At present, under existing enabling legislation and the Insurance Commissioner's interpretation thereof, deductible and/or co-insurance features cannot be offered by Blue Shield on full service policies to subscribers whose incomes are below the maximum.

2. It is possible to have deductible and/or co-insurance riders on all full service policies for those whose incomes are above the maximum. Such an individual purchases the plan as an indemnity, then elects to take advantage of a lower premium by accepting a deductible or co-insurance rider.

3. Deductible and co-insurance coverage is expensive to administer. Subscribers like deductible and co-insurance when they purchase coverage, but they are unhappy when they have a claim. Much education is needed to make this type of coverage saleable.

4. A review of "Voluntary Prepayment Medical Benefit Plans," the 1959 report of the Council on Medical Service of the AMA, reveals no mention of deductible or co-insurance in any of the plans, either indemnity or full service.

SUMMARY OF PLANS (INDEMNITY AND/OR FULL SERVICE) IN OTHER STATES

Illinois. The Illinois Plan; underwritten by private insurance carriers. Organized in 1946; 315,000 subscribers in 1958; created by Illinois Medical Society; cash indemnity only. Note: The Illinois Society recommends "that all participating doctors accept the benefits paid under the sponsored policies in full payment of their services for the low income group."

Illinois Medical Service, organized in 1946 by the Illinois Medical Society; 863,000 subscribers; cash indemnity only; no income limits; surgical benefits of $5.00 to $200.00 and medical benefits $5.00 first day and next four days, then $3.00 next 65 visits.

Indiana. Mutual Medical Insurance, organized in 1946; sponsored non-profit by the Indiana State Medical Society; cash indemnity only.

Wisconsin. The Wisconsin Plan, sponsored by the Wisconsin State Medical Society, utilizes eight private insurance companies; 33,590 subscribers in 1958; does not limit enrollment, but where incomes are in excess of $4,800 for Plan A and $3,600 for Plan B, the specified benefits are a credit to the total charges; specified benefits for general surgical and medical services in accordance with fee schedule.

Wisconsin Physicians' Service, statewide, sponsored by State Medical Society; contracts combine service and cash indemnity; 109,000 surgical subscribers and 107,000 medical subscribers; full service under Plan A $4,800 income, and under Plan B $3,600; no fee schedule; benefits paid on basis of reasonable charge of physician, with a maximum of $1,000. Benefits: general surgical under Plan A $300, under Plan B $200; medical under Plan A $10.00 first day, under Plan B $8.00 first day. Also has Major Illness Contract with 2,451 subscribers, paying physician 100 per cent of reasonable charges, 80 per cent nursing and drugs, $25.00 deductible and also paying hospital benefits.

Michigan. Michigan Medical Service, sponsored by Michigan State Medical Society, combines service and indemnity. Plan 1 and Plan 2 are service plans unless income is in excess of $2,500 for Plan 1 and $5,000 for Plan 2. Plans A, B, C and D are service contracts when income is certified by the employer in Plan A as $2,500 or less; in Plan B $2,500 to $5,000; in Plan C $5,000 to $7,500; in Plan D $7,500 and over. In the latter the specified benefits are a credit to total charges. Surgical benefits: under Plan A $5.00 to $225 and under B $5.00 to $300; Medical: under Plans A, B, C, D, $10.00 first and $4.00 the next 19 days.

IMPRESSIONS AND POSSIBLE CHANGES IN BLUE SHIELD POLICY

1. In Iowa, without major policy changes such as higher income limits for full service or an in-

SUMMARY OF BLUE SHIELD PLANS IN IOWA (FIGURES AS OF OCTOBER 1, 1959)

Policy	*Unit Value*	*No. of Contracts*	*No. of Persons Covered*	*Service Income Limit* SINGLE	TWO	FAMILY
A250	Yellow Book	235,276	597,000	$2,400	$3.000	$3,600
B300	$3.00 Red Book	3,538	9,000	2,400	3,000	3,600
B400	$4.00 Grey Book	Very Few		3,600	4,500	5,400
Blue Chip	Usual Fee	4,100	11,000	No limit—all on deductible.		
Senior 65	$2.00 Grey Book	4,500		2,000	3,000	30,000 Net Worth
X-L	(X-Ray Lab.)	40,000	100,000	All on deductible.		

demnity plan, Blue Shield will not continue to be a growing organization.

2. Blue Chip, deductible, full service and no fee schedule probably are not sound. For example, the Blue Chip has no fee schedule except usual and reasonable, and while it has not had much appeal to the subscriber (few sales), the average claim is running substantially above the $5.00 unit. Would this same progressive upgrading of fees result if all policies were "no fee schedule"?

3. To overcome the tendency of the physician to raise fees if patient has insurance, either Blue Shield or commercial, the full service fee (for low income patients with insurance) should perhaps be higher than the usual physician's fee to the uninsured low-income patient.

4. All policies should carry as an option a deductible rider or co-insurance riders applying only to subscribers with incomes above the full-service maximum.

5. Even with its legislative and other implications, a change to indemnity plans should be considered, since it answers so many of the objections raised by doctors. Much education will be needed to make it saleable.

6. If full service is continued, the $5,400 maximum may be too high. Perhaps $4,500 to $4,800 would be more realistic. If left at $5,400, what effect would it have on the premium to raise the unit value to $5.00, and would such a contract sell?

7. Sales resistance to Blue Cross-Blue Shield as a package, or to commercial coverage, tends to develop at approximately $10.00 per month premium for the family contract. The point of diminishing returns currently seems to be at about $15.00 per month. "Anti-selection" operates at or below this level, where only those who are or expect to be ill (poor risks) will buy the contract. Complete coverage in a full-service contract, either commercial or non-profit, is not saleable because the premium is far too high. Unions have been demanding full coverage where management picks up the tab, but an increasing tendency is evident on the part of management to resist picking up such a high tab.

MAJOR CURRENT BLUE SHIELD PROBLEMS

1. *Federal employees in Iowa (16,000) are now entitled to health and accident coverage.* Government pays half of cost. May choose commercial or Blue Cross-Blue Shield plans. Must be full service. Income service limits: $6,000 high income group, $4,000 low income group. Average salary for federal employees in Iowa is $6,200. Blue Shield is not now eligible in Iowa because of income limit ($5,400 and $3,600 B400). Six thousand federal employees now have Blue Cross-Blue Shield. Question: How will this problem be solved?

2. *Panel Medicine.* It has now reached Iowa. Commercial insurance companies insure groups. Example: Aetna. Fixed fee schedule. Requires full service for items covered. Physicians are enrolled on panel. Must accept fee as payment in full.

3. *Iowa is one of four states in the nation where the Blue Shield plan cannot participate in the Federal Employees Health Insurance Plan.* Question: What should Iowa medicine do about this third party provision for care?

MINOR PROBLEMS CONFRONTING BLUE SHIELD

1. *Blue Shield Request and Health Forms on applicants.* They have been furnished by participating physicians without charge. Non-participating doctors are now submitting frequent billings for completing forms. There is no allowance in the budget for this cost. Should Blue Shield pay for this service?

2. *Problems arising because participating physicians do not understand Blue Shield policies.*

a. Surgeon bills for pre-operative workup night before operation. Makes full charge for surgical fee.

b. Multiple billings same patient, two doctors, partners, etc.

c. Fictional treatment for purely diagnostic studies. One-night hospitalization with G. I., I. V. P., gallbladder x-ray. This is not all either black or white; many grey areas, e.g., referred patient is child with abdominal pain. Hospitalized and careful studies made. Not treated.

d. Billings for assistant fee and full surgical charge.

Participating physicians need education. Statements in Blue Shield books need to be more easily understood as to what is covered.

SUGGESTIONS

Greatly needed is an education program, sponsored by AMA, Blue Shield, the Iowa State Medical Society and commercial insurance companies, that would:

1. Teach the subscriber that an insurance company is merely a collection of subscribers.

2. Convince the subscriber that over-utilization increases premium costs.

3. Educate the public as to the value of deductibles and or co-insurance (insuring primarily against shock costs) relying on current income to finance small health costs.

4. Make the point that with health insurance, insurance should cover *major* medical costs, not *minor* ones. (Administrative claim cost, etc.)

5. Make provisions so that diagnostic x-ray, etc., can be done in a doctor's office, thus avoiding hospitalization for fictional treatment so as to obtain coverage.

6. Inform physicians on the above points, and especially on the major point that under Iowa law as it exists, Blue Shield cannot write exclusively indemnity policies.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

PRINCIPLES OF PUBLIC HEALTH ADMINISTRATION, by *John J. Hanlon*, M.D., M.P.H. (St. Louis, C. V. Mosby Co., 1960. $10.50).

YOUR HEART: A HANDBOOK FOR LAYMEN, by *H. M. Marvin*, M.D. (New York, Doubleday & Co., 1960. $4.50).

CHOLINESTERASES, by *M. A. Gerebtzoff* (London, Pergamon Press, Ltd., 1959. $8.50).

CHRISTOPHER'S TEXTBOOK OF SURGERY, SEVENTH EDITION, ed. by *Loyal Davis*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $17.00).

CURRENT THERAPY—1960, ed. by *Howard F. Conn*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $12.00).

THE OLDER PATIENT, ed. by *Wingate M. Johnson*, M.D. (New York, Paul B. Hoeber, Inc., 1960. $14.50).

BOOK REVIEWS

JEWISH MEDICAL ETHICS, by *Immanuel Jakobovits*. (New York, Philosophical Library, Inc., 1959. $6.00).

In our present-day society, when alas the success of individuals and institutions is oft times gauged by market-place standards, when higher insights are lost by the lower eye-sights of material gains and possessions, when the profit motive has become a powerful force in human striving, it is good to be reminded that in the past man's behavior and endeavor were regulated by ethical standards and moral values.

Since man is not merely *homo sapiens*, a composite of so much and so much mineral compound, not merely a body composed of bone, flesh and blood—albeit intricate and fascinating in structure—but is a spiritual being, endowed with a soul, personality, dignity and worth, therefore both science and religion have an interest and concern in the all-sided well being and treatment of man, and both have something to say regarding him.

The author of this encyclopedic work has traced from ancient to present-day Jewish sources the ethical standards and considerations revolving around medical science and its practice, the relationship between the medical practitioner and the patient, and the status of the individual in life and death. In tracing Jewish medical ethics, the author, a great scholar, offers a comparative study of the attitudes and views on medicine and its practice held by other religious groups and individuals over that same span of time.

From superstitious beliefs and occult cures to medical science and its practice, everything is touched upon in this book. The volume could very well be said to deal with religious medical ethics generally, and could have been titled thus, except that the major emphasis is on Jewish medical ethics. Other religious-group views are brought in to point out areas of agreement or disagreement. The Christian and Jewish doctors both frequently wish to know what the Jewish or Christian religious view is regarding certain medical practices; the author supplies many of the answers. Euthanasia, artificial insemination and the hotly-debated issues of birth control and vivisection are all among the subjects discussed, and the differing points of view of the major religious groups are presented.

The book, however, is not a code of final decisions on the problems of medical morality. Rather, it is a historical study designed to serve as a guide to the sources and principles governing the religious attitudes on medico-moral problems. The end of the book contains copious notes referring to the persons and sources from which the material has been derived.

Although the book is academic and scholarly, yet it is readable and most enjoyable, not only for Jewish readers and Jewish physicians, but also for other doctors and other non-doctors who are interested in gaining an understanding of ethical and moral law as it is related to the doctor and his patient.—*Rabbi Irving A. Weingart*

THE RELUCTANT SURGEON, A BIOGRAPHY OF JOHN HUNTER, by *John Kobler*. (New York, Doubleday & Co., 1960. $4.95).

This is an extremely well-written and absorbing biography of John Hunter, the Eighteenth Century genius of medicine, many of whose contributions still bear his name.

It is the reviewer's opinion that every surgeon who starts this book will not lay it down before finishing it. This great doctor's life and times were exciting ones. Surprisingly, the author, who happens to be a layman, writes with considerable understanding of the medical profession.

This is a most enjoyable book.—*C. W. Latchem*, M.D.

ADVANCES IN GYNECOLOGIC SURGERY, ed. by *S. B. Gusberg*, M.D., and CESAREAN SECTION, ed. by *Edwin J. DeCosta*, M.D., Vol. 2, No. 4 of CLINICAL OBSTETRICS AND GYNECOLOGY. (New York, Paul B. Hoeber, Inc., 1959. $18 per year for four successive issues).

Complete descriptions of surgical technics are presented in the gynecological section. These include some of the frequently and some of the less frequently performed gynecological procedures.

The cesarean section division is complete, and is an excellent composite of the views of many prominent specialists. All phases of the problem, indications, technics and management, are covered. The question of the management of subsequent pregnancies is thoroughly discussed.

The entire book is well illustrated.—*H. Kirby Shiffler*, M.D.

HONOR AND PRESTIGE

This article is in no way intended to disparage any medical or surgical specialty. With the enormous and ever-increasing quantity of scientific medical knowledge, it is necessary that a certain number of physicians be very learned in each of a number of narrow medical fields. The excellent medical care that is available to the people of the United States is the product of the combined professional abilities of the general practitioners and all of the various medical and surgical specialists. But this excellent medical care would be impossible if all physicians were specialists, and it would also be impossible if all physicians were general practitioners.

It is the intent of this article to review factors that cause the general practice of medicine to attract physicians. The practice of medicine is truly an *art*. This art is the combination of scientific knowledge and human understanding. Our premedical and undergraduate medical education begins with the study of the basic sciences, then later combines those basic principles and applies them to the physiological and pathological conditions that occur in human beings.

The general practitioner enjoys his practice because of his understanding of the emotional and psychological problems that affect his patient and his patient's family. As well as being their physician, he is their counselor and trusted friend. Thus, the term "family physician" rightfully belongs to the general practitioner. The broad scope of practice that the generalist enjoys and the honor in which he is held by his patients are what make general practice so interesting. In this broad scope, the general practitioner has no way of knowing what sort of problem may next confront him. It might be a cardiac situation, a fishhook in a man's hand, an infant with an upset digestive tract, an expectant mother or even a barren couple seeking advice. The general practitioner takes satisfaction from the trust that his patients repose in him. They don't look upon him as a comparative stranger whose help they will have occasion to seek only once; they regard him as a friend upon whom they can continue to rely whenever they are in need of medical care or advice.

It is a fact that the general practitioner has a much closer patient-physician relationship than any one of a group of specialists. Most general practitioners who have practiced in the same community for many years have the honor of being held in the highest esteem by their patients. This is evident, for example, when a physician delivers an infant into this world and then is retained by the infant's parents as the baby's physician, and thereafter is still retained by the erstwhile baby when he reaches adulthood. Many general practitioners have the honor of having delivered three generations in one family, all the time remaining the family physician for the succeeding generations. It is true that the obstetrician will perhaps deliver three generations in one family, but he will lack the continuous contact with the family and an enduring physician-patient relationship from generation to generation.

How great is the patient-physician relationship of the specialist? The radiologist interprets x-ray films, performs fluoroscopic examinations and calculates the therapeutic radiation for a diagnosed condition, but certainly his relationship with the patient is far less close than that of the general practitioner.

The anesthesiologist's contact with patients usually consists of a preoperative consultation, administration of the required anesthesia and postoperative care. Again, his patient-physician relationship is less close than the generalist's.

The surgeon has a very intimate relationship with the patient, but it is usually only for a short period of time because only a few patients require more than one surgical procedure during their lifetimes. Frequently, however, there is an indirect relationship because perhaps some other member of the individual's family needs the special services of the surgeon.

The pediatrician and the internist have a greater patient-physician relationship than other specialists, but this relationship is still less than that enjoyed by the general practitioner. This relationship is necessary if they are to have a proper understanding of the patient, be he an infant or an adult.

The psychiatrist really has to understand the patient and all the external factors that affect him, and in his consultations must establish a marked patient-physician relationship. Unfortunately, how-

ever, this closeness terminates in many cases at the conclusion of the psychiatric interviews.

The general practitioner in the smaller community has respect and honor, and is held in the highest esteem possible by the community. In the larger communities the general practitioner also is held in highest esteem by his patients. This honor does not have a monetary value, but certainly it gives a great deal of satisfaction to the doctor.

The general practitioner in our present free-enterprise system will always receive this honor and prestige from his patients and his community. Let us not allow this freedom and patient-physician relationship to be disrupted by governmental medicine.

I.A.G.P. RECEPTION

While attending the Annual Meeting of the Iowa State Medical Society, remember to attend the Academy-sponsored cocktail party at the Savery Hotel on Monday evening, April 25, from 6:00 to 8:00 p.m. All general practitioners, their wives and their friends will be welcomed.

CINCINNATI REVEALS ITS SECRET

The Cincinnati Blue Cross Plan attributes its success in making its premiums the lowest in the Midwest to a wholehearted cooperation between doctors and hospitals.

Hospitals and doctors cut down the length of patients' stays in hospitals by agreeing:

Not to admit hospital patients over weekends, unless immediate attention was needed. Short staffs on weekends mean that few routine tests and medical procedures can be done until Monday.

To speed-up reports on tests needed before a patient is discharged, since a five-minute delay often can mean an extra patient day.

Next, the Cincinnati Blue Cross Plan's Medical Advisory Committee, representing the medical staffs of all hospitals, established medical staff review committees and worked out other measures to make sure that:

1. Only those patients who need hospital care are admitted to hospitals.
2. Patients are kept in hospitals only as long as hospital care is needed.
3. Only those services required in the treatment of patients are ordered, and not unrelated diagnostic services. Bills are checked by medical review committees or by Blue Cross's own staff physician to be sure that unauthorized procedures have not been included.

In addition, representatives of 25 hospitals have formed a Cost Saving Ideas Committee to share information on possible economies on everything from administration to the use of supplies and services.

Cincinnati Blue Cross feels that its program of cooperation has accomplished much during the past two years.

POSTGRADUATE COURSES AT KU

Three postgraduate short courses are to be presented during April at the University of Kansas Medical Center, in Kansas City, Kansas.

The first of them, on ophthalmology, will be offered by the University in co-sponsorship with the Kansas City Society of Ophthalmology and Otolaryngology, on April 4-6. The faculty will consist of six teachers from the KU School of Medicine plus Dr. Henry F. Allen, an assistant clinical professor at Harvard; Dr. Robert Day, an associate at the Columbia University College of Physicians and Surgeons; and Dr. Donald M. Shafer, an assistant professor at Cornell. In addition to the formal lectures, the program is to include two pathologic conferences. The registration fee will be $40 for the entire program, or $20 each for single days.

The second of the programs, also a joint project of the University and the Kansas City Society of Ophthalmology and Otolaryngology, will deal with otolaryngology and will be presented on April 6-8. Besides nine KU faculty members, the lecturers will include Dr. Paul G. Bunker, M.D., of Aberdeen, S.D.; Dr. William Garth Hemenway, an assistant professor at the University of Chicago; Dr. Arthur L. Juers, an assistant professor at the University of Louisville; Dr. R. Dale Dickson, of Topeka; and Dr. Bentley A. Nelson, of Kansas City, Mo. The fees will be the same as for the ophthalmology meeting.

The third program, on April 11-13, will deal with anesthesiology, and the co-sponsoring organizations are the University, the Kansas and Kansas City Societies of Anesthesiologists, and the Kansas Medical Society. The faculty, in addition to three men from KU, is to consist of Dr. W. H. L. Dornette, head of the department at the University of Tennessee; Dr. Leonard W. Fabian, the chairman of the department at the University of Mississippi; Dr. M. Digby Leigh, an associate professor at the University of Southern California; Dr. Phillip S. Marcus, an assistant professor at Boston University; Dr. E. Trier Morch, head of anesthesia at Cook County Hospital; Dr. Morris J. Nicholson, of the Lahey Clinic; Dr. Max S. Sadove, a professor at the University of Illinois; Dr. Gordon M. Wynant, a professor at the University of Saskatchewan; Dr. S. Ross Melgaard, president of the Kansas City Society of Anesthesiologists; and Dr. Maurice M. Tinterow, president of the Kansas Society of Anesthesiologists. The fee will be $45 for the three days, or $17.50 each for one or two days.

For additional information, address the Department of Postgraduate Medical Education, University of Kansas School of Medicine, Kansas City 12, Kansas.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

POLIOMYELITIS, IOWA, 1959

Although the surveillance records of the State Department of Health on the 415 cases of poliomyelitis reported in Iowa for 1959 have not been entirely completed, February 20 has been set as the cut-off date, and some of the information regarding the cases is now being analyzed. To date, the listings show 273 paralytic cases, 128 non-paralytic cases, and 14 unspecified cases. There still is some hope of getting the unspecified cases reclassified as either paralytic or non-paralytic.

The accompanying chart presents the number of cases and the number of deaths from poliomyelitis in Iowa during the past 20 years. The figures for the first 15 of these years were totally unaffected by the use of poliomyelitis vaccine. Most people will remember that the first generalized use of the vaccine in the United States was in 1955, at which time most of the states participated in the field trials of the vaccine. In three Iowa counties, Woodbury, Linn and Scott, 13,000 children in the first, second and third grades in school, participated in that program. In 1956, almost all of the vaccine used in the state for the first nine months was in the National Foundation's program for giving three injections to about 95 per cent of Iowa's children in the first and second school grades. In the fall of that year, after the vaccine had been temporarily withdrawn from the market for a period of two or three months, in addition to the vaccine used to complete the school program, vaccine was available to physicians for youngsters in the five-to-nine-year age group. By July, 1957, a total of 5,301,165 cc. of poliomyelitis vaccine had been distributed in Iowa. On this basis, Iowans are in the top five states, on the basis of per capita use of the vaccine.

Year	*Cases*	*Deaths*	*Year*	*Cases*	*Deaths*
1940	927	64	1950	1399	65
1941	41	5	1951	465	22
1942	72	3	1952	3564	163
1943	204	15	1953	613	27
1944	204	16	1954	1445	55
1945	320	25	1955	561	14
1946	620	53	1956	580	5
1947	176	8	1957	78	8
1948	1236	81	1958	73	4
1949	1217	90	1959	415	22

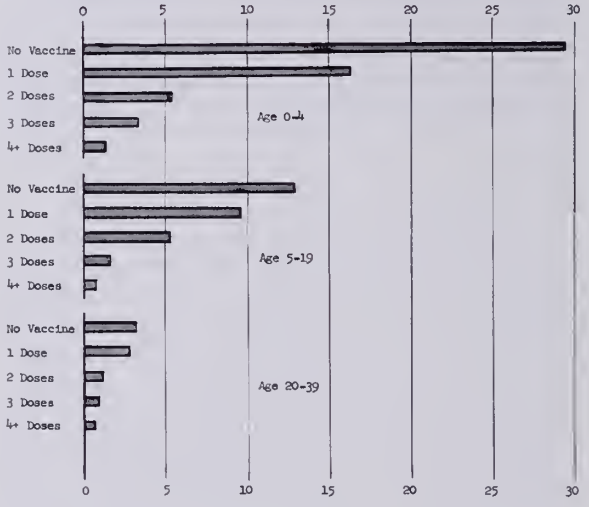
IOWA POLIOMYELITIS DEATHS, 1959

The following tabulation, arranged in order of increasing ages of patients, lists the 22 deaths from poliomyelitis that have occurred to date among the Iowans who contracted the disease in 1959. Twenty of them died during the year 1959. One, as indicated, died in Polk County in February, 1960. Only six of these 22 persons had received any poliomyelitis vaccine. One had received three injections during the school immunization program three years ago. Another had received two injections in 1957 and a third in March, 1958. The one patient who had received four injections had previously received the course of treatment with a previous pregnancy in 1957. Her physician is deceased, and consequently the exact dates of the first three injections cannot be obtained. The fourth or booster injection was given on August 6, 1959, as a part of obstetrical care during pregnancy. It is to be noticed that only two of the 22 cases resulting in death occurred in the age group 5-10 in which poliomyelitis was formerly most prevalent.

County	*Patient's Initials*	*Age*	*Sex*	*Injections of Vaccine*
Mahaska	D.B.	23 mo.	M	No vaccine
Des Moines	C.H.	3	M	2 injections (7-15-59 & 8-26-59; onset 8-31-59)
Mahaska	M.P.	4	F	No vaccine
Black Hawk	B.H.	4	F	No vaccine
Polk	C.R.	5	F	No vaccine
Polk	S.C.	9	F	3 injections (1956)
Woodbury	M.O.	13	F	No vaccine
Polk	J.F.	19	F	2 injections (11-5-58 & 12-3-58)
Lee	R.B.	21	M	No vaccine
Harrison	B.J.	24	F	No vaccine
Polk	B.M.	24	F	2 injections (1956) (died in 1960)
Cerro Gordo	W.D.	27	M	No vaccine
Buena Vista	M.N.	28	F	3 injections (4-2-57, 5-23-57 & 3-10-58)

County	Patient's Initials	Age	Sex	Injections of Vaccine
Black Hawk	J.F.	32	M	No vaccine
Webster	K.B.	34	F	4 injections (4th injection 8-6-59)
Webster	M.N.	35	F	No vaccine
Linn	H.S.	35	M	No vaccine
Webster	I.S.	38	F	No vaccine
Polk	F.W.	39	M	No vaccine
Webster	H.D.	40	M	No vaccine
Dubuque	A.E.	45	M	No vaccine
Lee	H.B.	45	M	No vaccine

POLIOMYELITIS, U. S., 1959 (PRELIMINARY TO DECEMBER 14)
Paralytic Cases Per 100,000 Population



This chart, prepared by the U. S. Public Health Service, shows the relationship between the lack of poliomyelitis vaccine and the number of injections of poliomyelitis vaccine to the number of cases of paralytic poliomyelitis per 100,000 population for the United States. The State Department of Health is in the process of preparing a similar chart showing the same information on paralytic poliomyelitis in Iowa for 1959.

MILWAUKEE'S FLUORIDATION REDUCES CARIES

A dental examination of 4,660 school children conducted by the Milwaukee Health Department following six years of fluoridation revealed a significant reduction in the incidence of dental decay in all age groups, five through 13 years.

The DMF index for a seven-year-old child was 1.29 prior to fluoridation and only 0.53 after six years of fluoridation, a reduction of some 59 per cent in the amount of dental decay.

After fluoridation, eight-year-olds showed decay in 46.9 per cent of their six-year molars; prior to fluoridation, the comparable figure was 81.1 per cent.

During the six-year period, the total cost of fluoridation was $240,468. The total saving in dental care necessary for permanent teeth was approximately $718,164. The annual per capita cost of fluoridation was estimated at 5½ cents.

MORBIDITY REPORT FOR MONTH OF FEBRUARY—1960

Diseases	1960 Feb.	1960 Jan.	1959 Feb.	Most Cases Reported From These Counties
Diphtheria	1	1	1	Woodbury
Scarlet fever	291	341	542	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	125	100	2714	Buena Vista, Des Moines, Linn
Whooping cough	4	10	17	Polk
Brucellosis	40	40	12	Scott
Chickenpox	742	848	691	Des Moines, Dubuque, Polk, Scott
Meningococcic meningitis	1	0	3	Polk
Mumps	399	294	296	Linn, Polk, Pottawattamie
Poliomyelitis	1	0	0	Winneshiek
Infectious hepatitis	48	53	16	Cerro Gordo, Monona, Scott, Woodbury
Rabies in animals	13	19	14	Buchanan, Linn, Story
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	36	51	22	For the state
Syphilis	83	110	78	For the state
Gonorrhea	83	83	78	For the state
Histoplasmosis	3	0	0	Cass, Cerro Gordo, Johnson
Food intoxication	0	0	0	
Meningitis (type unspecified)	4	3	1	Cerro Gordo, Dubuque, Linn, Pottawattamie
Diphtheria carrier	5	0	1	Scott
Aseptic meningitis	0	1	1	
Salmonellosis	1	1	2	Linn
Tetanus	0	1	0	
Chancroid	0	0	0	
Encephalitis (type unspecified)	0	1	2	
H. influenzal meningitis	0	0	0	
Amebiasis	0	1	2	
Shigellosis	9	1	4	Johnson
Influenza	9890	1359	141	Buena Vista, Polk, Wapello

In the Public Interest



The ISMS Is Working at the Doctor Distribution Problem

There is no question about it: the numbers of doctors of medicine are increasing less rapidly than are the numbers of people for whom doctors must provide care. Also, doctors are less widely distributed through our small towns and villages than they used to be. The Iowa State Medical Society recognizes those facts, and it is doing all it can to keep essential medical services readily available to all Iowans.

As a preface to a review of the steps that the ISMS is taking along this line, it is well to point out a few of the inevitabilities in the present situation.

First, although it may seem reasonable that young physicians should be available to replace the many country doctors who are now retiring after 50 or more years of practice, it must be remembered that 40 or 50 years ago doctors found it necessary to locate close to their patients and could content themselves with serving fewer of them. Travel was difficult throughout much of the year, sick people were cared for more frequently in their homes than in hospitals, and doctors had little or none of the equipment that only a large practice can be expected to finance. Nowadays, contrastingly, people can drive 10 or 20 miles to visit a doctor, or to enter a hospital for a few days if the doctor decides that they need constant attention and if they will be better served there than at home. Thus, each doctor can care for larger numbers of patients—and indeed he must care for more of them if he is to pay for the equipment that is now requisite to the rendering of truly first-class medical care.

It should be noted that the consolidation of medical practice in medium-sized and larger towns parallels a change that has taken place in other facets of Iowa life. Public schools are being consolidated for virtually the same reasons that doctors are drawing patients from areas having a radius of about 10 miles. By serving more individuals, both schools and doctors can afford better equipment and offer better services. Similarly, a change has taken place in the buying habits of rural people. They now buy their suits and dresses in the nearest good-sized town, rather than at the crossroads general store. They would like to see the nearby store stay in operation, chiefly so that they will have a place in which to buy a loaf of bread when, as occasionally happens, they discover while supper is being prepared that they have overlooked getting that item at the supermarket. They are similarly anxious that the nearby railroad continue operating passenger trains, even though they may not have ridden on one of them for years.

Second, it must be pointed out that doctors, quite like other Americans, are free to locate wherever they choose. Neither the Iowa State Medical Society nor any other organization or individual can tell any one of them where he must practice. He may feel that his office would be by-passed if he were to locate in a small community, or it may also be that he and his wife prefer to live in one of the larger communities.

Some of these current facts of life were pinpointed just a few weeks ago in a letter to the Iowa State Medical Society that was written by a doctor who is seeking a location. He said, in part:

> "————has a population of 592 (1950 census). It is located 8 miles from the tiny town of ————, which has a population of 353. There are two M.D.'s in the latter, and obviously these doctors are very dependent on surrounding small towns as well as on their own. Dr. ———— located in this heretofore doctorless place last year, but the people continued to go out of town for medical care, and only USED him for night and emergency work. Their business district is run down. My wife and I were invited to look the town over, and although neither of us was brought up in a city, we felt that the town had

nothing to offer in the way of schools, churches, recreation or social contacts. People go out of town to shop, and feel they may as well see one of the doctors in a larger town, because he surely must be better than a doctor who has settled in a village."

Third, doctors prefer to locate in places where there are other doctors and where there are hospitals. A physician who practices alone in a community lacking a hospital can't readily call upon a colleague to help him make a diagnosis in a difficult case, and his burden of responsibility—always heavy enough—may become intolerable. He must hospitalize some of his patients, but in doing so he commits himself to spending an hour or more each day traveling back and forth to visit them. Moreover, because hospitalized patients frequently decide that they wish to be cared for by a man who will be near at hand if a complication develops, many of them decide to change doctors.

Group practices are becoming more numerous in Iowa—arrangements in which several doctors, each doing a different type of work, have maximum opportunities to pool their skills for the benefit of their patients. But whether or not specialists are to enter the picture, it is generally thought, nowadays, that a town needing a doctor should seek two of them, because a lone physician is less likely to remain there permanently.

THE ISMS PHYSICIANS PLACEMENT BUREAU

The Iowa State Medical Society operates a Physicians Placement Bureau to facilitate an exchange of information between communities desiring physicians and young doctors who have expressed an interest in locating in Iowa. It makes no charge of any kind for the service rendered by that agency.

During the seven-month period July 1, 1959, through January 31, 1960, the Bureau received inquiries from 34 general practitioners and 50 specialists seeking Iowa locations. In the same length of time, it got requests for help from 19 Iowa towns seeking physicians, and assisted in placing two doctors each in two towns and one doctor each in seven others.

The staff of the Iowa State Medical Society is now completing the tabulation of returns from a questionnaire survey conducted last summer in an attempt to learn, county by county and town by town, the types of practice engaged in by all of the doctors who are now active, their ages, the medical schools from which they graduated, where they served their internships and various other pieces of information that will facilitate predictions regarding where serious shortages of physicians may develop in future years, and where—on the basis of present indications—Iowa towns of various sizes and locations can expect to get new doctors.

One of the impressions to which the incomplete tabulations give rise is that doctors have a tendency to locate in towns similar in size to those in which they grew up, and further, that surprisingly large numbers of them have returned to practice in their former home towns.

If it turns out that those impressions are justified, perhaps the small towns that wish to assure themselves of continuing medical care should find ways of encouraging some of their own young people to study medicine. Doctors throughout the state will be glad to counsel with high school students, speak at career days in the local schools and give whatever help they can in the furtherance of other projects designed to stimulate interest in the study of medicine.

THE ISMS EDUCATIONAL LOAN FUND

Because medicine is the longest and most expensive of all courses of study, many medical school students encounter financial difficulties that threaten to prevent their ever becoming doctors. In order to help them through such crises, the physicians of Iowa, through the Iowa State Medical Society, have set up the ISMS Educational Loan Fund, and as of July 31, 1959, had put $157,748.06 into it. About 18 or 20 loans are made from it each year, averaging about $2,000 each, to young men who can offer no collateral other than good character and proved ability as students.

THE PRECEPTORSHIP PROGRAM

Something else that the doctors of Iowa are doing, in part at least to help interest medical students in future practices in this state is to cooperate with the S.U.I. College of Medicine in the preceptorship program. Under it, each of the juniors at the medical school in Iowa City spends a part of the summer understudying and assisting a private practitioner, thus learning the day-to-day work, in most cases of a general practitioner, and the satisfactions it provides. In a majority of instances, the student and his wife (if he has one) live in the doctor's home for those few weeks, and have a chance to share in his social life as well as in his professional activities. If there is a way of attracting men to general practice in Iowa, this would seem to be it. Following graduation and internship, many young men have returned to become the partners of their onetime preceptors.

The Iowa State Medical Society and the S.U.I. College of Medicine are also cooperating on an additional project having to do with the optimum distribution of physicians. With the assistance of representatives from the S.U.I. faculties in geography, sociology and business research, they are planning a series of studies designed to reveal the minimum size of Iowa town that is capable of supporting a doctor of medicine, or if that proves impractical, they will seek the help of one of the foundations in assessing the potential of each Iowa community that is said to need but hasn't been successful in attracting and holding physicians.



MEDICAL HISTORY

E. D. Plass and J. H. Randall, and Obstetrics and Gynecology at the State University of Iowa 1926 to 1955

PRESTON T. BROWN, M.D.

PHOENIX, ARIZONA

In 1931, Dr. James Ewing gave the anniversary address at the New York Academy of Medicine, a lecture entitled "The University and the Medical Profession." It is a classic exposition of the place of the medical faculty in the university, and constitutes a measuring rod by which one may evaluate the performance of a department or of an entire medical faculty within a university. It also provides thoughtful reading for boards of trustees, presidents of universities, deans and faculty-selection committees. It should be required reading for such.

Ewing states that the university idea involves the cooperative, intellectual and moral effort to collect, evaluate, disseminate and apply knowledge for the needs of man. Let us take the Department of Obstetrics and Gynecology at the State University of Iowa since 1926, and measure it against Dr. Ewing's criteria to see how well it has lived up to his criteria.

July 1, 1928, was a stifling, hot, bright, cloudless day in Iowa City; the humidity hung like a blanket over the town, and all night the cicadas and the tree frogs had kept the air full of sound. The electric fans had been busy throughout that hot night. The first little four-wheel trolley had crashed over the switch of the Van Buren Street by-pass shortly after six o'clock in the morning, and at a nearby house on this street, John H. Randall had already been out working in his little back-yard garden. Always rising at dawn, he was ahead of schedule this day, for he was to report to the University Hospital and begin his rotating internship.

It had been a long, hard pull to reach this important milestone. A few days earlier he had received his M.D. degree and taken the examination of the State Board.

John had been one of the seven children of a resourceful mother. Although there were no doctors in the family, and the robust health of all had precluded much contact with medicine, John had from boyhood expressed the desire to be either a physician or a butcher. The witty minister who became his father-in-law suggested in later years that perhaps he achieved both ambitions.

From early youth, he had read enormously and stored everything in a phenomenal memory. He had married Ruth and graduated from Defiance College seven years before. Together, they had taught school in a small Iowa town for three years preparing the budget for his admission to medical school in September, 1924. Shortly before school opened, the bank failed with all their savings. However, Ruth kept roomers besides teaching in the Iowa City schools, and somehow they made ends meet. Ruth was a true artist in the kitchen and John was a most devoted admirer of her talents there; so in spite of the hard times, he was a solid, even overweight, specimen of physical and mental vigor. Thus he entered the halls of the University of Iowa—there to dwell for 35 years.

Randall had finished as number one man in the class of 1928, a position won not by brilliance or facility in learning, but by hard, dogged work, complete devotion to medicine, and a powerful ability to concentrate. The internship at that time was of two years' duration, the first year rotating through medicine, surgery and pediatrics as well as obstetrics and gynecology, and the second year devoted to the department of the intern's choice. The appointments were made through the chosen department, and it was probably a matter of pride to the young obstetrics and gynecology department to have attracted the best student of the class to its program, now in only its second year.

On July 1, 1928 the obstetrics department was on the second and third floors of the center section of the old hospital, subsequently known as East Hall, and the gynecology ward was on the sixth floor of the west wing, far removed from the rest of the department. The whole structure and its equipment was in the last stages of obsolescence, a shambles soon to be abandoned. However, the

Dr. Brown delivered this paper before the Linn County Medical Society in Cedar Rapids on October 8, 1959.

beautiful modern medical center on the west side of the river would not be ready until November.

John Randall, reporting for the first day of duty, met the chief. Everett Dudley Plass, then about 42 years of age, was starting his third year as head of the Department of Obstretics and Gynecology. It is his personality, character and intellectual attributes that dominate the 30-odd years that we are now looking back upon. Ewing says, "It is the belief of many that in the choice of the University faculty, one will go further by choosing men rather than experts." It was so with Plass. His qualities as a man overshadowed his widely recognized expertness in the professional field, and they rendered of small account his minor deficiencies in other areas.

Plass had graduated from Colgate and studied medicine at Johns Hopkins University, where in his junior year the great J. Whitridge Williams interested him in obstetrics, as he had so many other bright young men of that school. World War I interrupted his training, and he served in Britain and later on a Red Cross mission in the Balkans, where he contracted tuberculosis from the dismal climate and rugged living. He spent a cure time at Saranac Lake, repeated later on in the 20's. Thus he arrested the disease, but it lay dormant to triumph in the end.

During his residency days, Plass had demonstrated much originality, and especially was skeptical of empirical procedures of doubtful rationale. He studied simplification of obstetrical care and even demonstrated that better results could be achieved by abandoning the long-honored shaving and perineal antisepsis of normal delivery, showing that better results were obtained when only a soap and water shower was given.

William Benbow Thompson, of Los Angeles, who served under him in 1922-1924, recalls that in 1922 Plass became the first obstetrician-in-chief to the new Henry Ford Hospital, in Detroit. Through his illness and war service, as well as his interest in laboratory research, he had become somewhat rusty in delivery room technic and found it necessary to take a short refresher course under his own resident to renew his skills. It must have been a trying time when his first socially-prominent, short, plump primigravida had a face presentation, chin posterior, and Thompson was away on vacation. Finally, it rotated and delivered well.

We don't know how Plass became interested in the chair at Iowa, then perhaps not so well known a school as at present. Probably his old chief Williams, ever a maker of professors, had a finger in the pie. In addition, the Rockefeller Foundation was interested in the school, and perhaps had some influence in the selection of the faculty. We do know that he and Mrs. Plass visited the hospital one morning, had lunch with the dean, Lee Wallace Dean, and the appointment must have been soon made. At any rate, in 1926 Plass succeeded Fred W. Falls, who went on to a long and fruitful career at Illinois. The building of a new Department began. This was a "full time chair" and Ewing says, "that the full time system has placed a premium on research and a discount on clinical efficiency," and again "some medical educators aim to teach as little of practical nature as possible, in which ambition they are often remarkably successful." Devoted as Plass was to clinical and laboratory investigation, the teaching of the practical aspects of obstetrics and gynecology became his primary mission and one in which he excelled. The goal of preparing medical students to enter general practice in the State of Iowa, and to provide them a basic knowledge of this specialty were his leading concerns throughout the years. In addition, the training of residents to become specialists and teachers was carried on in the most practical manner, and investigative work and clinical observation took third place in the program.

Increasingly as the years went on, Plass undertook to extend postgraduate education to practitioners in the field. In the small towns of Iowa and other midwestern states at that time, it was most difficult to keep up with medical progress. Plass was one of the pioneers in bringing postgraduate education to the local community—"Mohammed going to the hill," he called it. He travelled thousands of miles in Iowa, Kansas, Oklahoma and other states over abominable highways, often at night and in motor cars that were poorly equipped to deal with the stress of winter, carrying with him slides, movies, the obstetrical mannikin, obstetrical instruments and other material for demonstrations and lectures. He thus made a notable contribution to the improvement of obstetrical care at the grass roots level. It was a trying chore, but apparently the results rewarded the long and continued effort that Plass exerted in this field. This may have been his most lasting contribution.

He was a scholar skilled in the written and spoken word. His ideas arranged themselves into neat outlines, making it easy for students to follow his instruction and absorb his meaning. His cheerfulness and gentle sense of humor were modest and unassuming. When speaking, he used a loud, clear voice without florid rhetoric or redundancy, but had sufficient color in his personality and address to make his points emphatic. Although not interested in establishing a private practice of his own and professing affection for research, Plass was an excellent diagnostician and consultant. Throughout the years, his surgical judgment was respected above all others by the team who surrounded him. On the other hand, he almost never operated and was truly an atrocious technician in the operating or delivery room. Episiotomies which had been repaired by Plass were a sight to be viewed by all of the house staff.

An outstanding quality and perhaps his most engaging one was his open-minded willingness to debate differences of opinion with students, internes and residents (no matter how humble they might be) without a trace of condescension or dogmatism. There was no tendency to silence dissenting voices as long as a reasonable point of view was expressed. He delegated authority and responsibility in clinical matters without stint when once they had been earned, but throughout the years he retained full administrative control tightly in his own hands.

The house staff occasionally were annoyed by his tendency to work with the senior nurses outside the chain of command through the residents. Thus, the chief might be better informed as to the state of the Department after 10 minutes with Miss Merrill than the senior resident after a painstaking ward round of one hour. In the light of later years, many a former resident is better able to understand this, and realize that while good residents may come easily, a top-quality obstetrical nurse is a rare gem and to be cherished above all else in the Department. Another weakness, perhaps, was his neglecting to give guidance in career planning to those who were finishing the house service. Generally, residents were left to their own devices in seeking academic appointments elsewhere, or in entering private practice. More could have been done in these matters. Probably there was no want of feeling, but there was a lack of action.

Ewing said that above all "the art of teaching remains the same as ever. Its essence consists in personal contact, the spoken word, a fitting personality and the instinct of the helping hand. The great teachers have had the ambition to produce men superior to themselves." So it was with Plass.

On July 1, 1928, when John Randall began his internship, Plass had assembled an all-star team in his department. Norman S. Miller, associate professor and soon to become professor, had been trained in Ann Arbor and had come with Plass to Iowa as his right hand man. He was the artist of the operating room, where he was as calm, cool and courteous as he was skillful. Tall, straight and youthful-appearing (as he is to this very day), he was the soother of injured feelings as well as a speaker of clarity and force. Soon to become head of the department at Michigan, he was the beau ideal of the students and the despair of some of his contemporaries in other departments who could perceive that he was headed for the stars.

The senior resident was T. J. Williams, soon to be off for a stint in private practice, and then to finish his life as professor at Virginia. There was H. Close Hesseltine, devoted, loyal, honest, modest and self-abnegating to a fault. Later, and still, professor at the University of Chicago, he was even then studying vulvo vaginitis. He has pursued this villain through all the 30-odd years since then, and although he has never conquered it, he has won some of the jousts. William F. Mengert, a scholar with a mind full of ingenious ideas, and a bold and daring spirit, was stubborn and aggressive in debate, ever willing to admit error when, as occasionally happened, he was proved wrong. He became professor at Dallas where he began the department, and now he graces the chair at the University of Illinois. He has made many fine contributions to the art and the teaching of the art.

And then there was John H. Randall, who at this time, of course, was the low man on the totem pole. He was the hardest worker on the team from his first day in the Department until an automobile injury began his final illness. He was a true scholar, above all proficient in observation of the medical phenomena, classifying them in his mind and able to call them from his marvelous memory to shed light on later problems. For the most part, he was placid and calm, but occasionally an outburst would occur when his patience had been overtried. He was modest, retiring and always rather formal.

He went through the residency of four years and spent one additional year in Vienna mainly in the study of pathology. His interest in this field never dimmed, and he achieved a high degree of proficiency in it. He passed through the academic ranks to professor, and upon the death of Plass became the chief. The burdens of administrative work were not pleasant to him, and took too much of his time from patients and students. He found distasteful the politics and diplomacy that the position required. In retrospect, he admired all the more the skills that Plass had exercised so easily for so many years in these fields.

His greatest pride and joy was in the actual practice of obstetrics and gynecology. He was devoted to his patients and they to him, and proud of the multitude of babies named for him. Equally, he took deep pleasure in the teaching of practical courses to internes, students and residents. He spoke the plain American language, and shrank from the polysyllables that scholasticism mistakes for intellectualism. He would never have called a pregnant woman a "gravid individual" or say that a woman was "hysterectomized." He was at his best among small groups of students with whom he could use his favorite technic, the Socratic method of teaching. Beginning with questions which appeared to be out in the wild blue yonder and to have no immediate reference to the point of issue, he could bring the students step by step to a lasting understanding of a given point. In the lecture room he used repetition and short comprehensible propositions to drive home his subject, avoiding colorful language and unnecessary showmanship. Throughout the years he kept a rotating fund which he used for loans to assist departing residents in their early days of practice. He al-



Dr. E. D. Plass

ways received the money back before it was due, and went on lending again each year.

When Norman Miller was called to Ann Arbor in 1930, there came to the Department the most colorful and picturesque character of all time, Erwin Graff von Pancsova. For 20 years he had been assistant in the Werthein Clinic, in Vienna. He had been displaced by changing politics in the old country, had been referred to Plass by Whitridge Williams, and was appointed to the vacancy at Iowa. He was a master of delightful personal charm, as well as a ferocious, intractible operating room tyrant. He introduced and taught the principles and technic of routine total hysterectomy years before it was accepted in other parts of the counry. After his appointment, subtotal hysterectomy almost completely disappeared from the Iowa scene. The technic of vaginal hysterectomy for myoma and other non-prolapse conditions was brought to Iowa by him. It was not widely employed, however, until a more refined procedure was publicized by Heaney. Graff made notable contributions during his four years at Iowa, and they have perhaps never been fully acknowledged.

With the departure of Graff in 1934, Mengert returned, and with Plass and Randall made up the triumvirate that studied, taught, practiced and did research for the next 10 years. Students by the hundreds and residents by the dozens received training during those years. They found themselves thoroughly grounded in the fundamentals of obstetrics and gynecology, they were well able to compete with those of similar levels of training from other schools, and for the most part, they fully appreciated the teaching. Although a goodly number of students and residents have remained in Iowa, the Department is represented in most sections of the country and in some areas in Canada. Everywhere that the residents have gone, the teaching of Plass has spread and his influence still carries on.

In 1944, Mengert was called to the chair in Dallas, and shortly thereafter William Keettel took his place in the faculty and now carries on the torch that lights up the path for the future. Dr. Keettel began his residency in 1937, and has been a member of the Department ever since, except for military service.

Time and space do not permit full discussion of the teachings and published work of the Department during these years. There are over 300 publications on a very wide variety of subjects. The largest single contributor to the published material was Dr. Plass himself, but there were about 110 contributors in the bibliography of the Department, each writer receiving headline billing where it was earned. Plass was not a man to place his name on a paper in which he was not a most important worker. On the other hand, Randall had no great interest in publication, feeling that a large number of the medical writings to be found in the literature were published without sufficient background of work and that to a large extent they constituted the rediscovery of old facts. He was contemptuous of those who wrote purely for political reasons.

From 1920 to 1930, one of the most common gynecological operations was the suspension of the uterus. Plass was one of the first to recognize and teach the fallacy of uncomplicated retroversion as a cause of pelvic or back symptoms. In the Department at Iowa City, the suspension operation became one of the least common, and in every instance it was necessary to convince the chief of the indications for it. One author at this time was editing a three volume work on obstetrics and gynecology and assigned the discussion of uterine displacements to Plass. The editor was unable to accept the chief's nihilistic attitude toward the operation, and after a heated correspondence another writer was substituted. The test of time has showed that Plass was correct regarding this operation, and it has largely disappeared from the operating room and from the literature. During these early years, acute and chronic pelvic inflammatory diseases were prevalent, and they continued to be so until the introduction of antibiotics. The teaching in the Department was strongly conservative. At a time when bilateral salpingectomy was a commonly performed operation, it was standard practice at S.U.I. to treat the patient without operation if possible, and if a confusion of diagnosis required laparotomy, the conservative attitude was assumed when the diagnosis had been established. This teaching likewise stood the test of time.

A source of furious indignation on the part of Plass was the occasional discovery of cases of cancer of the cervix in women who had had subtotal hysterectomies for vaginal bleeding without prior pelvic examination, and in whom the true source of bleeding was not discovered prior to the incomplete operation. Plass would be in a lynching mood when events like this occurred. He was thoroughly aware of, and constantly preached, the high cancer potential in postmenopausal bleeding. The conservative treatment of eclampsia, then generally accepted in theory but not always practiced, was one of his absorbing interests. Along with Fred Falls, he was late, if ever, convinced of the advantage of De Lee's low cervical cesarean section over the classical procedure. The latter was almost always performed on the service until Von Graff began to demonstrate the low operation, and the latter has been adopted by most of the graduates of the department in later years. Indeed some of them have become exponents of the extraperitoneal cesarean section.

Among the outstanding items of research work in the Department was the demonstration by Mengert of the mechanics of uterine support. He confirmed among other things Dr. Plass's theory that the round ligaments are of trivial importance in this respect. Seibert and Keettel made advances in the field of labor induction through their work on artificial rupture of the membranes. Prentiss and Tucker demonstrated the diagnosis of placenta previa by cystography, procedures that may well be more accurate and satisfying than the soft tissue studies that radiologists seem to prefer.

De Gowin, in medicine, with the assistance of Plass and the stimulus that he provided, established blood banking, and they made a series of studies on bank blood that are of value in this most permanent and important advance. Trussell developed pure cultures of trichomonas, and the completion of Koch's postulates were carried out by the production of disease when the pure culture was introduced into the patient. Kraushaar began the study of vaginal cytology, and this procedure has now had an established place in the Department for over 12 years, and of course, this is accepted universally. Bradbury and Willis Brown performed pioneer work on the gonadotrophic hormone, and later Bradbury and Keettel studied lutein-stimulating hormone, especially in relation to the polycystic ovary. It is impossible to summarize all of the work and teaching that was done during these years; the reprints of the reports of it make up into five large volumes, and there have been over 110 contributors. In spite of all this extensive writing, it is interesting to note that endometriosis was hardly touched upon at all. In the literature from other sources, articles on this topic often constitute a large part of medical writing in the gynecological field. Perhaps this is due to the fact that in the charity service less endometriosis is to be seen than in the private service.

How then does it all add up? Did the taxpayers of Iowa receive from this Department what they needed and what they wanted during these years? Did they get a good run for their money? A rousing affirmative is the answer that must be given. Hundreds of young men and women have been given a sound foundation for practice in this field in general work, one upon which they may build continuing education with confidence. Dozens of residents have become specialists, leaders of the art in communities across the country and in Canada. Grass root postgraduate education was carried into the rural areas at a time when programs such as these had previously been unknown. No doubt this work gave some stimulus to the later-developed programs of the American Academy of General Practice. Clinical observation and true research have advanced the art, and expanded and disseminated knowledge. Yes, it was a good run for the money. Those were golden years.

The State University of Iowa has been fortunate in having men like Ed Plass and John Randall in other departments of the medical school, as well as in obstetrics and gynecology. As we look forward to the future, to sum it up with the final quotation of James Ewing: "It is a fortunate school that numbers in its staff many self-effacing, hard working, earnest men who take pride and pleasure in seeing creative work throughout the ranks of their students, and whose departments are free from dogmatism, egotism, and self-assertion."

ANNUAL MEETING, IOWA TRUDEAU SOCIETY

Dr. Paul M. Seebohm, of Iowa City, president of the Iowa Trudeau Society, invites all Iowa physicians to attend the hospitality hour, dinner and medical program that will highlight the organization's Annual Meeting, at the Savery Hotel, Des Moines, on Wednesday, April 6. The hospitality hour will follow the business meeting at 5:30, a smorgasbord dinner will be served at 6:30, and the medical program will be presented between 7:30 and 9:00 p.m.

"Farmer's Lung" will be discussed by John Rankin, M.D., of Madison, Wisconsin, an asscciate professor of medicine at the University of Wisconsin medical school, and "Silo Filler's Disease" will be discussed by Richard D. Eckhardt, M.D., chairman of the Department of Internal Medicine at the Iowa City Veterans Administration Hospital. The program committee includes Dr. Mary Beth Dewey, of Iowa City, Dr. S. F. Yugend, of Indianola, and Dr. James E. Kelsey, of Des Moines.

Acceptances should be sent to the Iowa Trudeau Society, 2124 Grand Avenue, Des Moines 12. The invitation is extended to each Iowa physician and his wife.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

Convention time is approaching, and we hope you plan to attend. Mrs. Gastineau, our gracious national president, will be with us through most of the meeting. Monday morning, we shall hear from our county presidents and delegates, and you won't want to miss the tea at the beautiful new Des Moines Y.M.C.A. Building in the afternoon.

Mrs. Verne Vance (June), the animated luncheon speaker for Tuesday, is the type who can spark an inner glow in each of you that will show you "How to Stay Alive as Long as You Live." A new film, "Government Medicine in England," depicting a different angle from that which many of you have seen presented on the editorial pages of your newspaper recently, will be shown several times Monday evening in the Hospitality Room, and after the luncheon on Tuesday. Prizes for the highest score, lowest score, grand slam and small slam in four hands of bridge will also be featured on Monday evening in the Hospitality Room.

Crowning all of these activities, of course, will be the Spring Frolic Dance, on Tuesday evening following the banquet. All of the proceeds will go to our Health Educational Loan Fund (formerly Nurses Loan Fund, but now expanded to cover students seeking other sorts of paramedical careers).

We are anxious to meet you at the Convention!

Spring Board Meeting

The weatherman cooperated with us and withheld the predicted March 15 snowstorm until the following day, thus allowing 21 of us to attend the Spring Board Meeting and return home safely.

Glowing reports of excellent work done in some of our county Auxiliaries were given by Mrs. D. S. Egbert, president of the Webster County chapter, Mrs. Louis Goldberg, president of the Polk County Auxiliary, Mrs. G. S. Atkinson, president of the Mahaska County group, and Mrs. F. H. Entz, of Black Hawk County. The state officers and committee chairmen gave excellent reports of their current year's activities, achievements and plans for the balance of the year.

Organized medicine's legislative plans and accomplishments were the subjects of reports by Mrs. H. G. Ellis and Mr. Gerald Buckles, the AMA field consultant for Iowa and Minnesota. Mr. Julian Serrill, of the ISMS field staff, had just returned from Washington, D. C., on the previous evening, and was able to report on the most recent developments relating to Forand-type legislation in the national capital. Among the points that were emphasized was the fact that the lawmakers are receiving about two letters in favor of Forand-type proposals to every one letter in opposition. Thus, even though they personally may not favor such bills, the pressure to which they are being subjected will be difficult to withstand. This underlines our responsibility for talking with all our friends who are interested in the preservation of private enterprise and calling their attention to the implications of these proposals. We must persuade them to write letters to their congressman and senators. They may have less spare time for writing letters than do the Social Security beneficiaries, but they have more at stake.

Incidentally, have you written *your* letters to Washington?

Mrs. E. A. Larsen
President

COUNTY AUXILIARIES

Clay

A certificate and a bouquet of roses were presented to Mrs. E. E. Munger, of Spencer, in recognition of her winning first prize in the church music category of a nationwide contest sponsored by the National Association of Congregational Christian Churches. The presentation was a feature of the February meeting of the Spencer Clef Club.

Mrs. Munger's contest entry was an anthem based on the hymn "When Morning Gilds the Skies," arranged for children's, junior and adult chorus, with piano, organ and instrumental accompaniment.

Woodbury

Wives of doctors attending the sixty-fourth annual meeting of the Sioux Valley Medical Association, February 23-25, in Sioux City, were entertained by the Sioux Med-Dames at a luncheon at the Normandy Restaurant, the second of those days. A hat style show followed, at which the doctors' wives modeled about 30 Easter hats.

OUR STATE PRESIDENT



Mrs. Elmer A. Larsen

Mrs. E. A. Larsen, the 1959-1960 president of the Woman's Auxiliary to the Iowa State Medical Society, is a native Iowan. She attended schools in Newton and Chariton, and graduated from the State University of Iowa. She interned in dietetics at Johns Hopkins Hospital, in Baltimore, and afterwards taught three years in high schools. Prior to her marriage to Dr. Elmer A. Larsen, she was a dietitian at St. Joseph's Hospital, Centerville, and an instructor in that hospital's school of nursing.

The Larsens have made their home in Centerville since their marriage. They have two children: Richard, a sophomore at the State University of Iowa, and Linda, a junior in the Centerville High School.

Mrs. Larsen is active in many civic and social organizations and in church groups. She is a member of P.E.O., T.T.T. and Eastern Star, and is a past president of her hospital auxiliary. She is a board member of the Caravan Trails Girl Scout Council, and a member of the Centerville Park Commission, as well as an active participant in "Band Mothers," a sponsor of her local Future Nurses' Club and a tireless worker in all health fields.

ATTEND THE PRESIDENT'S COFFEE
Hospitality Room, 8:00-9:30
Monday and Tuesday Mornings
April 25 and 26
MEET YOUR STATE OFFICERS

GARDENING AND MENTAL HEALTH

MRS. JOHN L. KESTEL
WATERLOO

Gardening, according to Genesis, is the oldest of occupations; and of all the recreational or occupational activities or hobbies indulged in by human beings, it is the best suited to all ages.

Children naturally take a keen interest in flowers, even babies are attracted by their colors. When the weight of years and experience lies heavy on the shoulders, few things can bring a radiant smile more rapidly than a beautiful flower. All the world loves a beautiful garden.

Mental illness is the nation's leading health problem today. Mentally disturbed patients occupy more hospital beds than those suffering from any other disease.

Every single one of us has within him the seeds of a mental condition. Some tolerate stress better than others, and some are called upon to endure more than others, but each has his breaking point.

In the light of these facts, it behooves us all, and especially as gardeners, to look to defenses, and to fortify ourselves against any possible inroad to this dreaded condition.

Each of us can do much to insure himself against mental disease. We can make a conscious effort to develop what is best in our personality. What activity or situation gives us the feeling of well being? Once discovered, give that your greatest share of leisure time and energy. It is through cultivating our strong points that we grow to maturity and emotional health.

If it be gardening—go to it! The price paid for those precious bulbs is minor compared to a psychiatrist's fee. Let us "tranquilize" ourselves by practical application of developing an appreciation for the beautiful and simple things of life. To commune with nature, study birds, grow flowers, creates within ourselves an immunity to nervous tension.

From the earliest days of medicine, work has been recognized as a valuable aid in the treatment of disturbed minds—keep occupied and interested. Some writers claim that occupation as a therapy originated in the Garden of Eden when the Lord sent Adam forth to till the ground and plant a garden. Ancient Greek and Egyptian documents inform us of the use of music, dancing, and gardening as a diversion for mental disorders.

Activities serve to diminish anxiety and act as an outlet for aggression and energy which if directed in a useful and interesting manner serves to relieve tension and cause fatigue which is conducive to real rest and relaxation of both body and brain. One of the first books on this subject was written in 1910 and called "Invalid Occupation"

Reprinted from THE NATIONAL GARDENER, May-June, 1959, pp. 23-24.

by Miss Susan E. Tracy, a nurse who recognized the value of nervous patients' being busy.

There is a health-giving and therapeutic value to horticulture. Richardson Wright, a well-known writer on this subject, refers to it as "horto-therapy."

Gardening offers the physical and psychological advantages of sunshine, fresh air, and the satisfaction of the parental instinct, expectation, and work-appetite together with the opportunity of discovering and sharing while enjoying one of the greatest diversions in life.

Even on a wintry night by the fireside, with the wind howling outside, the birth of a new plant can take place. Seed catalogues and the beautiful editions of nursery stock can be an endless joy. Hope springs eternal within the true gardener's breast.

A busy, interested, and happy mind is a healthy mind. Let us spare the tranquilizers and till the soil.

FIRST NATIONAL FNC CHARTER IN IOWA

The Future Nurses' Club of Oskaloosa, with 40 members, is the first club in Iowa to receive a FNC national charter, granted by the National League for Nursing. The charter is presented to each club that fulfills requirements that have been established by a national advisory committee on Future Nurses' Clubs. As a chartered club, the Oskaloosa group is participating in a national youth program to help meet future nursing needs. FNC activities are designed to enable members to explore career opportunities in nursing and allied health fields.

For information on how the Future Nurses' Club in your town can qualify for a charter, write to the State Auxiliary office, 529 Thirty-sixth Street, Des Moines 12, Iowa.

IOWA HOMEMAKER OF TOMORROW

Mary Ellen Waterbury, a senior at Waterloo West High School, has been named Iowa's Homemaker of Tomorrow. Mary Ellen, the daughter of Dr. and Mrs. Charles A. Waterbury, Jr., received the highest rating in a written examination on homemaking knowledge and attitudes administered to 8,630 senior girls in 501 schools throughout the state.

She will receive a $1,500 scholarship, and will become a candidate for the title of All-American Homemaker of Tomorrow. On April 23, along with other state winners and their school advisors, she will begin a one-week, expense-paid tour of New York City, Williamsburg, Virginia, and Washington, D. C., where the national winner will be announced. At the national level, scholarships of $5,000, $4,000, $3,000 and $2,000 will be awarded to the first, second, third and fourth place winners, respectively.

Mary Ellen plans to attend Grinnell College and to major in speech correction.

CONVENTION SPEAKER



Mrs. Verne W. Vance, of Omaha, will be the featured speaker at the Tuesday luncheon during the Auxiliary's annual convention. In addition to being an accomplished lecturer, Mrs. Vance has had a rich background of experience in teaching, social work and positions of responsibility in civic organizations.

SPRING FROLIC

Tuesday, April 26, 9:00-12:00

Grand Ballroom—Hotel Savery

Benefit

Woman's Auxiliary Health Educational Loan Fund

Evan Morgan's Orchestra

Standard Medical & Surgical Company will sponsor the social hour from 8:30

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. E. A. Larsen, 323 Oak Street, Centerville

President-Elect—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls

Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls

Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12

Editor of THE NEWS—Mrs. H. C. Merillat, 116 Lincoln Place Drive, Des Moines 12

Medical Aspects of Old Age

OTTO N. GLESNE, M.D.

FORT DODGE

OLD AGE—OR, RATHER, let's call it the aging process—is a subject that many of us hate to talk about. It defies definition in terms of years, for one can't say that an individual is middle aged before his sixty-fifth birthday and old aged immediately thereafter. Aging cannot be defined in terms of the changes that occur in people, for they occur at different times to different ones of us. Aging is a lifelong process that begins with birth and ends with death. Beginning at age 30 or thereabouts, muscles weaken, bones grow brittle, blood vessels harden, and sooner or later the aging process gets its man.

Aging is a fact of life, and intelligent people accept it realistically. Yet, as someone has said, it is a painful process—somewhat like cutting off a dog's tail an inch at a time.

In 1934, Winston Churchill announced: "Having held great offices for nearly a quarter of a century, I can assure you I am quite indifferent whether I hold office again or not. I am now getting to be an old man." At that time, he was 60 years old. Yet, in the next 20 years he shouldered his heaviest responsibilities and won his greatest honors. I hate to think what England would have done without this "old" man. Certainly civilization benefited from the postponing of his retirement.

It's not how *old* you are, but *how* you are old that counts! Chronological age has little to do with a human being's capacity to contribute significantly. One's age is an important bit of information the first time he makes a trip to his polling place, or when he gets his first driver's license, but at other times it is meaningless except as a vital statistic. We all know people who are burned out at the age of 60, and by the same token we know of many who are alert and vigorous at 75 and 80. Take for example the man of whom I heard a few weeks ago who had taken up skating at the age of 90.

Nevertheless, old age—whatever that inexact term may mean—is a very popular subject these days. Speakers mount platforms to talk about it, and it is discussed in Congress, in state houses and in city halls. On radio and TV, the topic is brought up quite frequently, and people everywhere are according it major importance. Every year, a few million more words are devoted to the problems of the aged.

THE AGED GET ATTENTION BECAUSE THEIR NUMBERS ARE GROWING

It must be admitted that the aged do have problems. But teenagers have problems, young married couples have problems, and men and women in the so-called prime of life have problems. In fact, human beings have problems throughout life. Those difficulties begin with the first yell in the delivery room, and don't end until the physician in attendance signs the death certificate, 70 or more years later.

From a health standpoint, the problems of the elderly are fewer and more frequently remediable than they ever have been. Surgery, for example, is performed nowadays on patients for whom it would have been out of the question no more than 10 or 15 years ago. Furthermore, we have new drugs and new technics of treatment with which to combat disease.

Why, then, are the problems of the aged becoming such a popular subject? The reason is simply that we have so many *more* elderly people than ever before. And we have more of them because our nation is healthier. Medical and public health progress in recent years have cut down the incidences and death rates of most communicable diseases. Infant and maternal mortality rates have been very sharply reduced. The physician, the dietitian, the bacteriologist, the biochemist and many others in the vast teamwork of medical research have all contributed substantially to the reduction of disease. In so doing, they have kept the young and middle aged healthier than ever before in history, and they have produced a steady rise in the proportion of people living into what was once considered old age.

In the last half-century, our average life expectancy at birth has increased by more than 20 years. Although our population has doubled during that time, the numbers of our people over 65 years of age have quadrupled. There are now more than 15,000,000 persons in the United States who are 65 years of age or older, and there will be 20,000,000 of them in the very near future.

LAYMEN AND PHYSICIANS MUST COOPERATE IN HELPING THESE PEOPLE

These statistics are a cause for rejoicing, rather than a reason for alarm, but we must temper our rejoicing with realism. Having added years to millions of lives, we must take immediate thought of helping make those years as full and rewarding as possible. For they should be years of accomplishment, not years of grim endurance.

Now as I have said, our elderly people can not only live longer but can live healthier lives in these times. Good *health*, however, means far more than the absence of disease or infirmity. It means

mental and social, as well as physical, well-being. And any factor that detracts from that well-being will lessen the individual's total health. We doctors know how to treat pneumonia or high blood pressure, for instance, but we cannot treat and never will be able to treat the ailments of loneliness or rejection, or supply our patients with useful things to do. About all that we can do is to diagnose the social maladies that frequently are responsible for the physical complaints, and the therapy must be provided by the patient's family, friends, church and community—that complex group that we call "society."

If there were three times the present number of physicians, nurses and hospitals, all of them working 24 hours a day, they still could not provide good health to the elderly without the help of the rest of society. For example, that intangible factor called "the will to live" isn't something that a physician can supply or can direct that the patient secure, in dose-sized tablets, at the nearest pharmacy. Yet people who have a will to live can survive illnesses that might otherwise prove fatal, and people who lack it often die long before they should. It's not so much that age or disease has defeated some of my patients. Rather, they have prematurely surrendered. A lonely man whose family and friends are too busy to bother with him may quite understandably feel that he is simply serving out an interminable life sentence. Elbowed aside by a society that places the accent on youth, a society that tends to measure human value in terms of productivity, a society that is always in a hurry, such a man is likely to feel that his life lacks either purpose or importance. This is the man who is ready to throw in the sponge. This is the man who fails to survive what should have been a routine illness.

Old people, like young ones, need something to live for! The best way to make them useful—and thus to make them well and happy—is to show them that society needs them, that society values their wisdom, experience and capabilities, and that society is anxious to use their talents and skills. Our elders want to be self-reliant, to maintain their faith and pride in themselves. They want a helping hand when necessary, but they do not want a hand-out!

Our older people want to be treated as individuals, and they have a right to be. The 15,000,000 people whom I am talking about have only one thing in common, that they are 65 years of age or older. Many of them work at their old jobs, some because they want to, and others because they must. Many have retired—some because they had to, and others because that was their choice. Many are finding life deeply satisfying. Others are finding it empty and meaningless. The thing we must remember is that each of them is different, as different as one fingerprint from another. We must treat them that way.

In Fort Dodge, we have a shining example of an attempt to handle the problem of retired people 65 years of age and older. I refer to the project named Friendship Haven, which is now considered highly successful. But let me tell you of another sort of arrangement—one that meets the needs of just two elderly people, but one which, multiplied by several thousand, could bring the greatest happiness to a majority of our senior citizens. Just a few weeks ago, a middle-aged woman came into my office, bringing her mother with her. "How is your dad getting along?" I asked the younger of them in the course of our conversation.

"Oh, he's just fine," she replied. "He's taking care of Tom's station, and he just loves to do it." Tom is her husband, a filling station operator. Her father is 80 years old, but there are some jobs at which he can substitute for his son-in-law, and doing them gives him the feeling that he is definitely useful.

"How about Mom here?" I asked.

"Oh, she takes care of Dad."

Here is another type of solution, and it's a very satisfactory one, for each of the members of this family is happy. Each of them has a feeling that he or she is useful. Go over to the west side in Fort Dodge to buy some gasoline, and you will see what I mean.

Everyone in the group of people who are considered old must be handled individually. Each must retain his desire to live, the feeling that he has something to live for and the feeling that he can pay his own way.

Yet, as ridiculous as it sounds, countless Americans believe that 65 candles on a cake disqualify a man for anything more than baby sitting, whittling and sleeping in the sun. This is shockingly evident in the field of industry, where the right to be useful is frequently abridged by compulsory retirement policies. Many of the same firms that hire with the greatest care, taking into account the applicant's training, skills, aptitudes and potentials, find nothing inconsistent in retiring valuable employees by a chronological rule of thumb!

There is nothing wrong with retirement for those who want it and are ready for it. It is the arbitrary sort of retirement, regardless of whether or not the employee is still capable of doing his job, that does the damage.

Although medical science has helped bring about longer lives for millions of people, society must bear the responsibility for making those added years a blessing, rather than a mere reprieve.

Someone has said that there is no shortcut to old age, for it is the work of a lifetime. But it is equally true that society must help prepare the individual for retirement and old age through education. This too should be the work of a lifetime. While they are yet comparatively young, people should be encouraged to find and cultivate interests in books, in music, in manual arts or in other

hobbies and avocations. Our adult education programs should be fostered and extended for this purpose, among others.

SOLUTIONS SHOULD BE SOUGHT AT THE LOCAL LEVEL

Thus, the needs of elderly people aren't exclusively, or even principally, medical. They have housing needs, vocational needs, recreational needs and even educational needs. Some of these requirements can be met by government, but if so, they can best be met by government at the local level, since each elderly person is highly individual, and local governments are capable of the greatest flexibility. Much of the task can best be done by private groups such as churches, and by the families to which the old people belong.

The Forand Bill certainly could not provide a satisfactory answer. Under a federal program, the Forand Bill would give hospital, surgical and nursing-home care to all those who are eligible for Old Age and Survivors' Insurance benefits under the Social Security System, most but not all of whom are over 65 years of age. It wouldn't matter how large an income the individual had, or how many thousands of dollars he had in his safety deposit box. Regardless of his need or his lack of need, the government would pay the costs of his illnesses.

There are many serious objections to such a plan. It would play havoc with the traditional relationship between patient and physician. It would inevitably lead to political abuses. It would be staggeringly expensive. It would send taxes soaring even higher than they are now. It would put the federal government into an area of health care with which it is ill equipped to cope.

Now let's talk about taxes for a minute. As you know, there recently has been in increase in the Social Security tax rate, so that the total now is 6 per cent—half on the employer and half on the employee. Scheduled increases are to take place—according to a law that is already on the statute books—so that in another five or six years (or is it seven?) a total of 9 per cent will be collected from employer and employee, half and half. The cost of the Forand program would add another $2,000,000,000, at least, in the first year, and would become a rapidly increasing burden upon the Social Security System. As for the ultimate tax load that this and the other facets of Social Security would necessitate, one can only hazard a guess. In Italy, at the present moment, social security taxes amount to 35 per cent of the national payroll, compared to 6 per cent in this country. In Great Britain they amount to more than 20 per cent. One can be assured that if the Forand Bill goes into effect, taxes for Social Security in this country will quickly exceed the already projected 9 per cent.

The excessive cost of the federal government's providing health care for the aged is a serious threat to our national solvency, but there is another and even more dangerous aspect of the proposal. It is not the question of whether or not the doctor is to survive, or whether the doctor is to get more money or less. After all, doctors are only a very small segment of the population. The real peril is the threat that the Forand Bill offers to the American philosophy of life. On this point, I shall quote at length from an essay entitled "The Challenge of Medical Care Insurance," by C. Marshall Lee, Jr., M.D.,* for Dr. Lee has expressed my thoughts far better than I could:

THE AMERICAN PHILOSOPHY OF LIFE IS BEING ENDANGERED

"A curious paradox of some contemporary social philosophy is the idea that a man should spend what he earns for his pleasures, rather than for what he needs. It is appropriate, so this reasoning goes, that he should buy a television set, a vacation in Florida or an outboard motor because these are cardinal rights. But for something that he really needs, such as his life or his health, or the life of his child, someone else should pay. This may be the government, his employer, his union, his great aunt or anyone else who can be cajoled or coerced into paying the price for him. If no one else will pay for it, the doctor should serve him for nothing.

"This is the philosophy of the child, whose needs should be met by his parents, but whose Christmas money, or earnings for sweeping the front porch, should be spent for his personal pleasures. This may be acceptable for the child of an indulgent parent, but it is not appropriate for a free man in a free society. It makes him less of a man and more of a dependent child; yet some seem to consider this one of their rights.

"In the United States [a man likes] to believe that the fundamental social and economic structure is predicated on the assumption that each adult is industrious and responsible, that he should be rewarded in proportion to his skill and industry, and that as a free citizen his rights are balanced by his obligations to others. He expects to support and provide for himself and his family by his own efforts in his own way, but with proper concern for those weaker and less able than himself. He does not ask for unearned help at the expense of someone else, unless through circumstances beyond his control he urgently needs it.

"He understands that man is imperfect and needs curbs and controls, and that some men need more than others. He knows that fallibility and selfishness are human weaknesses correctable by improving each individual—which is to say they are not the product of any economic system.

"He recognizes that no man has the right to oppress other men, but that privilege and material advantage, if honestly and justly gained, are fair compensation for competitive enterprise, indus-

* Lee, C. M., Jr.: Challenge of medical care insurance; essay on principles, philosophies and practices. NEW ENGLAND J. MED., 262:332-342, (Feb. 18) 1960.

try and prudence. He believes that stagnation and deterioration are inevitable if the incentives to individual growth are denied. He recognizes that pride in competitive achievement is legitimate virtue that merits recognition and reward. It is evident to him that if everyone begins at the top, there is nowhere to go but down, and that the top, even as a point of departure, will not be very high. A forest of seedlings is no forrest at all. Some trees grow taller than others. This is the essence of democracy, of controlled free enterprise, of capitalism. By whatever name it is called, it requires no apology. Its achievements are proper grounds for vigorous pride. Its failures are directly traceable to aggregates of weakness or deceit in its human components, and do not stem from the system itself. A city and all of its people should not be destroyed because a few criminals are among them. Evil is selectively sought and eliminated, preserving the good."

Dr. Lee happens to be an assistant medical director of the John Hancock Mutual Life Insurance Company, and it is really gratifying to see to what extent executives such as he are exerting themselves in opposition to federal medicine.

He went on to say, "The danger is real, and it exists because so many people, through apathy or ignorance, are unaware of how much is at stake. Too many people look upon the medical profession and the insurance industry alike as 'vested interests' dedicated in sordid avarice to depriving the public of the beguiling gifts of a paternalistic government. Too few have given the subject enough effective thought to realize that the public as a whole has more to lose than any special segment of it through such a catastrophe.

"If the provision of medical care becomes exclusively a function of the government and if the free individual loses the right to make his own way on his own responsibility, the fundamental structure of society is endangered. Food, clothing, shelter, recreation and even thought, as in totalitarian welfare states, can become monopolies of the government, and freedom is lost. The road back from such a disaster would be a long and arduous one. The unhappy examples of those who have been led down this road, voluntarily or involuntarily, are everywhere."

MEDICINE WILL DETERIORATE IF IT IS REGIMENTED

Medical care is not susceptible to production-line methods. Care for any segment of our population, the aged included, calls for a cooperative attack on the problem by nurses, doctors, hospitals, social workers, insurance companies, community leaders and others. It requires flexibility of medical programs, an ingredient which unquestionably would vanish the moment government sought to build a health system from a blueprint calling for mass treatment.

The medical problems of the aged primarily involve chronic illness and the so-called degenerative diseases. In a very large percentage of these cases, the main need is not for an expensive hospital stay or for a surgical operation, but for medical care at home or in the doctor's office. In other instances, the important requirement is nursing care in the patient's home or in the home of a relative. In still others, custodial care in a nursing home or a public facility may be the only answer, but the point is that the medical needs of chronically sick elderly people are subject to countless variations.

WE ARE FINDING ANSWERS WITHOUT FEDERAL INTERVENTION

The answer to the problem of providing the best possible health care for our elderly people lies, rather, in community action. Through cooperative efforts of private citizens and the personnel of the health professions, through retirement villages, new nursing homes and chronic disease centers, through home care programs, through recreational facilities and through research programs—all of which are now under way from coast to coast—the problem can be solved without the domination and regimentation of the federal government!

Tremendous advances are also being made in the field of health insurance. According to the Health Insurance Institute of America, 60 per cent of our senior citizens who need and want health insurance will have protection by the end of next year, and that percentage will increase until three-quarters of them will be covered in 1965, and 90 per cent in 1970.

Finally, physicians all over the country are investigating every possible method of reducing the costs of health services, and they are particularly active in developing new and improved facilities especially tailored to the particular requirements of older citizens. In other words, the problem of financing the health care of our elderly is being met by private insurance and prepayment plans, and the particular hospital and medical needs of the aged are being met through voluntary efforts of private citizens at the community level. The health professions and the communities are getting on with the job—a job they know and understand. But much, of course, remains to be done.

I have no doubt that if we continue to apply ourselves to the solving of this problem, the day is not far off when every senior citizen in the United States will have the chance he deserves to find richness and meaning, health and community understanding during what should be the most rewarding years of his life.

Attend the Annual Meeting of the
AMERICAN MEDICAL ASSOCIATION
Miami Beach, June 13-17, 1960

Scientific Articles

The Use and Abuse of Antibiotics

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PHILADELPHIA, PENNSYLVANIA

THERE IS REASONABLE certainty that the mechanism of action of our most common and potent antibiotics lies in their interfering with enzyme systems which the microbe has and which we lack. It is becoming apparent that the enzyme systems that are most suitable for this purpose often involve vitamin synthesis. If this seems strange, it should be recalled that a vitamin is a substance which is essential to life but which *homo sapiens* is unable to make for himself. Ordinarily, we obtain our vitamins from the plants or animals that we eat, and they in turn have obtained many of their vitamins from soil bacteria. For present purposes, we might define a vitamin as a substance produced by bacterial enzymes, and essential to life for both bacteria and man. Any chemical that acts upon vitamin-producing enzymes is therefore active against the bacteria that have the enzymes and inactive against the human host who lacks them.

The antagonism between the sulfa drugs and para amino benzoic acid has long been understood, and recently it has begun to appear that pencillin is a competitive antagonist of B_{12}. Though the antibiotics were of course discovered empirically and, so to speak, accidentally, the horizons opened up by this theory of their general mode of action are very exciting ones.

As it happens, some bacteria have learned to escape this action by developing an ability to do without the vitamins, to utilize the product of another organism or to manufacture the vitamins in another way. Here, there is a paradox, for the more specialized the pathogenic bacteria have become, the more vulnerable they are. It may be said that the less specialized the bacteria, the more likely they are to be able to adapt themselves to new conditions. In the bacteria of disease, specialization manifests itself as pathogenicity. It is of course obvious that some organisms are far more virulent than others. One of the best examples of this fact is the gonococcus, which is an extremely difficult organism to grow in the laboratory, requiring special conditions of blood medium and a carbon dioxide atmosphere. Even under the best conditions, the culture is often unsuccessful. By contrast, a human being who has been exposed to the gonococcus in the conventional manner is almost certain to acquire the disease. The gonococcus has thus adapted itself perfectly to the specific area of conquest, and will not grow except under special conditions. Given those conditions, the organism is irresistable.

By contrast, many other disease bacteria such as staphylococci and the coliforms are more nearly saprophytes or vegetables. These organisms will grow under almost any circumstances, but do not cause disease except where there is a lack of host resistance—i.e., where the patient is weak, debilitated or possessed of necrotic tissue that offers favorable circumstances for proliferation. Finland has recently presented evidence to the effect that we have no fewer infections and no fewer people dying of infections in our hospitals than we did 25 years ago. This, of course, is not to say that there has been no improvement, but rather that the improvement has consisted largely of eliminating specific bacterial infections of the pathogenic sort. We are now faced with just as many people dying, but in general those who are dying of infectious diseases are the elderly patients with staphylococcal pneumonia, for example, rather than the 18-year-olds with meningococcal meningitis. Had the shift been in the other direction—from older to younger fatalities—I think we should have been

Dr. Fisher, an internist in private practice, made this presentation at the annual meeting of the Iowa Academy of General Practice, in Des Moines on September 28, 1959.

far from pleased with the results of the introduction of antibiotics.

Let us turn now to certain types of problems which are becoming fairly well stereotyped in the use and abuse of antibiotics.

FEVER OF UNKNOWN ORIGIN

The patient with a high fever for which no cause is readily evident produces one of the common frustrations in medical practice. Though this sort of case is referred to as "fever of unknown cause" in Philadelphia, and as "pyrexia of obscure origin" in Boston, the temptation to give the patient antibiotics is the same everywhere. Exceptions must be made for cases of such severity that life is imminently threatened, but in the presence of a normal white blood cell count, it is probably best *not* to give antibiotics. Such cases—and they are the usual ones—will almost invariably prove to be febrile virus disease in acute situations, and malignancy or collagen disease in chronic ones.

In treating such patients, our older colleagues have an advantage in that they followed the natural history of diseases in the pre-antibiotic era and know that acute diseases usually get better by themselves, and that chronic diseases generally prove to be incurable. The younger men will have to regard this problem as an exercise in self-discipline, at least initially. Success in one case will then breed confidence in the application of a conservative attitude in the management of succeeding ones.

The trial of antituberculous therapy is a special circumstance in the administration of antibiotics blindly for febrile disease, for an improvement will support the diagnosis. But even here it is best to be conservative, to hesitate and to reflect that if a favorable result appears, for whatever reason, the patient is committed to a minimum of a year's therapy.

If I may repeat, it is usually best not to give antibiotics to patients with fevers of unknown origin, and the discovery of a normal white blood cell count should strengthen one's resolution to refrain.

BACTERIAL ENDOCARDITIS

The validity of the preceding point is underlined in cases of endocarditis. Naturally, a physician is distressed to find that autopsy has revealed that one of his patients has died of an untreated bacterial endocarditis. A longer view, however, would probably be that even if antibiotics were blindly given to unsuspected cases of endocarditis, such inadvertent therapy would almost never cure the disease. Avascular vegetation requires a very high level of antibiotic in the surrounding blood stream for a very prolonged period. Furthermore, the antibiotic must be of the bactericidal variety—an agent such as penicillin, vancomycin and streptomycin—and must not be of the bacteriostatic variety, such as the tetracyclines, the sulfa drugs and various "broad spectrum" medicinals. Since the latter drugs are most likely to be chosen for blind therapy of an occult febrile disease, the chances of accidental cure of endocarditis are very slim, and it would seem that the best interests of the patient would lie in the withholding of therapy in an effort to make the diagnosis.

If the blood culture is positive, it seems natural enough to request a test of sensitivity of the organism to antibiotics. Almost routinely, these organisms will be reported to seem "more sensitive" to the broad-spectrum, bacteriostatic antibiotics than they are to penicillin or streptomycin. Nevertheless, bacteriostatic agents will never cure endocarditis, and the treatment of choice is penicillin in massive dosage on the order of 50,000,000 units per day in conjunction with streptomycin, for six weeks, *regardless of the results of the sensitivity tests.* Because of its toxicity, it may be well to give the streptomycin only during the first and last of those weeks.

FEBRILE SHOCK

It is becoming increasingly well recognized that septicemia with gram negative organisms will often present as shock. If the patient is in the postoperative or post-delivery state, the differential diagnosis is a more difficult problem, but even when the patient presents as a case of shock of unknown cause, the difficulty in diagnosis is extreme. Since these patients are deathly ill, the temptation is to concentrate on the treatment of shock, usually by administering nor-adrenalin or similar products, and to overlook the fact that the patient also has a fever. This last point should be a clue that presses one to do a white blood cell count and draw a blood culture, but fever is easily overlooked because of the cold, clammy skin. Under the best of circumstances, only a few of these patients survive, and it is crucial that they be given pressor agents and possibly even cortisone, so that they may survive long enough for the antibiotic to do some good. But, of course, it is extremely important that the appropriate antibiotic be given at the earliest possible moment. On the following day, the blood culture may confirm the clinical suspicion, but it is obvious that the clinical suspicion must have been strong enough to prompt one to vigorous action. This usually is a time when the diagnosis will not be clear.

PROPHYLACTIC PENICILLIN IN RHEUMATIC FEVER

It is now firmly established that the daily administration of prophylactic doses of penicillin will markedly reduce the incidence of repeat attacks of rheumatic fever. Fortunately, the beta hemolytic streptococcus has proved to be so specialized

an organism that it does not readily develop resistance to penicillin. A single attack of unequivocal rheumatic fever is a clear-cut indication for many years of prophylactic penicillin therapy to prevent recurrences. We are now becoming aware that the previously recommended dose of a 200,000-unit oral tablet daily was too small, and the American Heart Association now advises 400,000 units daily. In many ways, it seems to be a better plan to give 1,200,000 units of benzanthine penicillin intramuscularly once monthly. It is practical that these patients should be followed once a month anyway, and if they are forced to appear for injection, the physician can be sure that they receive daily doses. One can seldom be sure that children are continuing to take oral medication. Incidentally, there is a great temptation, I am afraid, for a public health organization to give a mother a bottle containing 10,000 tablets, and to tell her that she is to give the rheumatic fever patient one tablet a day and bring him back when the bottle is empty.

Hidden in this prophylactic program is the disadvantage that if these children ever should develop subacute bacterial endocarditis, the organism that lands on the valve will almost certainly be one which is resistant to penicillin. Besides watching these children carefully for recurrences of rheumatic fever, we are obligated to give them greater than average attention in all of their other infectious illnesses.

STAPHYLOCOCCAL INFECTION

One of the most sobering subjects for reflection in the entire area of the use and abuse of antibiotics is the irony of Sir Alexander Fleming's first having demonstrated the action of penicillin against a culture of staphylococcus. At the present time, few if any staphylococci are sensitive to penicillin, and indeed erythromycin too has come and gone.

The staphylococcus, being more a vegetable than a pathogen, adapts quickly. Nothing is more certain than that the drug which is effective today will be useless within two years. I should say that the manufacturers of novobiocin and Chloromycetin would be well advised to make hay while they can. Some hospitals, in considering this matter, have set aside the newest and latest antistaphylococcal drug, and have prohibited its use except with clearance from an antibiotic committee. That drug is then released for general use when a newer and better one has come along. Thus, the best drug is reserved for the most severe cases, and the development of resistant strains is inhibited as long as possible. It is easy to see how unattractive this technic must be to drug houses anxious to spin off their development costs before better antibiotics make their products obsolete.

One paradox in this regard lies in vancomycin, which can be used only intravenously, and is very hard on the veins even then. For those hospitals where general cooperation cannot be attained for the reserve program I just mentioned, vancomycin probably can be expected to serve the same function, because its general use will probably never be great. The present effectiveness of Chloromycetin is no doubt due to its bone-marrow toxicity, which has reduced the general use of the drug. One is even tempted to coin an aphorism about this situation—that probably the more toxic and difficult or expensive a drug proves to be, the longer can it be expected to retain its usefulness.

Although vancomycin and similar products may be useful for staphylococcal endocarditis, pneumonia, meningitis and other life-threatening illnesses, they aren't applicable to the boil, carbuncle, infected laceration and other staphylococcal infections that could be treated as ambulatory lesions in the office if a good antibiotic were available. I ask you to ponder whether it is not getting to be true that we can no longer afford to squander our antibiotics on such minor conditions, as we have been doing for the past 20 years. Rest, heat and elevation, as well as adequate drainage, are the unexciting principles to which we are going to be forced to revert. The time may already be close when we shall have to isolate staphylococcal infections and deny them antibiotics unless they are life-threatening.

We have been on a 25-year binge, in which we treated cellulitis of the foot with 10 Achromycin tablets, in which we made up for our negligence of operating room asepsis by administering postoperative antibiotics routinely, in which we treated pneumonia in the home, and in which we treated otitis media by telephone!

We are going to find it necessary to lay aside our prescription pads and make more fuss about simple cleanliness in the hospital. Hospital administrators will have to be restrained from putting a new patient into a room where the mattress is still warm from his precedessor. The ritual of hand-washing must be revived, and the doctrine of "germs" resuscitated. I don't know just what my grandmother meant by "germs," but she was deathly afraid them, and if she meant coagulase positive staphylococci, I think her fears were quite realistic. The day of spraying carbolic into the air probably will not return, but I really would not discount the chances that air conditioning may become an essential part of modern hospital equipment.

Some of this work can be done only by committees, since a considerable part of the problem is that many doctors and nurses harbor antibiotic-resistant organisms in their nasopharynxes—organisms which they have picked up from patients who were receiving antibiotics. We pass them on to the public in our offices, and to other patients in the hospital, by carrying them about on our clothes, hands and stethoscopes. We all

know that the organisms acquired from one patient's boil may lead to a staph pneumonia in another individual. But how many of us are willing to close our offices and stay away from the hospital until our own carrier states have been eradicated? The temptation to keep going is too much pressure for any conscience to withstand, and rules requiring temporary retirement can be enforced only by committees, amid an atmosphere of general compliance by all medical and paramedical personnel, from the chief of service down to the orderly.

The Gulf Oil Corporation advertises that its rest rooms "are as clean as a hospital's," but the firm may be unduly modest, since I know of no hospital that uses ultraviolet lamps on its toilets. If it came to a choice between the gonorrhea one might obtain at a filling station, and the antibiotic-resistant staphylococci that one undoubtedly encounters in a hospital, I should think most of us would choose the gonorrhea and take our chances on satisfying our relatives about how we got it.

RESISTANT GONOCOCCI

Before we get carried away by the precept that neisserian infections are truly no worse than a bad cold, we must take notice of recent reports from the Orient of cases of gonococci either totally or partially resistant to penicillin. Larger doses of penicillin or tetracyclines have sufficed so far to eradicate the condition, but apparently the day is over when we could give a single injection of procaine penicillin and admonish the sheepish victim to go and sin no more. The Pennsylvania Hospital recently dismantled the iron handles on the sides of urinals in the urology clinic, where generations of sufferers tried to "pull down the wall," but I wonder whether those antiques may not someday be marketable.

SYPHILIS

Penicillin is now so clearly recognized as the drug of choice in the treatment of syphilis that many dermatologists are calling back all of the patients whom they treated previously with heavy metal and are retreating them with that antibiotic. Fortunately, we now see very few cases of luetic aortitis, even in the city hospitals, but they do occur. There seems no doubt that penicillin will occasionally cause fibrosis of the coronary ostia, and harm the patient rather than help him. An older generation called this the "therapeutic paradox." Nevertheless, the prognosis is for two years of life in untreated cases, and we now see many patients who have survived 15 or more years with treatment. I believe that the therapeutic paradox is a risk which almost every patient would be willing to run if he understood all of the factors in his own case, and penicillin is thus indicated in all cases. Tetracycline is effective against the spirochete, a fact that is occasionally useful in patients who are allergic to penicillin.

THE BLOOD-BRAIN BARRIER

Penicillin crosses the blood-brain barrier only at sites of inflammation. Sulfadiazine crosses the normal meningeal barrier. Although there isn't much to choose between the two in the treatment of meningitis, sulfadiazine is much to be preferred in the prophylaxis of skull fracture. Bloody ears and a bloody nose or leaking spinal fluid should be a warning of the presence of a compound skull fracture, on the heels of which meningitis is sure to follow quickly. Thus, it is an indication for sulfa drugs. This point was widely recognized during World War II, but has been largely lost sight of because of the essentially non-traumatic nature of civilian practice, aside from cases resulting from automobile and hunting accidents.

PYELITIS OF PREGNANCY

While sitting on a hospital mortality committee, I have been distressed to see how many persons die in uremia, which an autopsy proves to have been due to chronic pyelonephritis. I should hazard the conjecture that these cases had their start several years earlier, either at the time of prostatic surgery in men, or pyelitis during pregnancy in women. Since the men are elderly and the women are young, it is more of a tragedy when we allow the pregnant woman to go untreated. It is essential that we recognize that pyelonephritis can continue to smolder after the flank pain, fever and burning on urination have been controlled by sulfa drugs, and that the patient can have chronic progressive pyelonephritis for years without exhibiting the slightest symptoms. It is true that she may have white cells in the urine, but what woman doesn't? We have an obligation to follow this apparently "cured" patient, and make certain that her urine culture is sterile on three occasions after symptoms have subsided. I am very much afraid that in this day of specialization, the obstetrician doesn't see the cases of uremia later on, and the internist doesn't treat the pregnant woman.

A point to remember in the determination of antibiotic sensitivity is that conventional procedures will not test for sulfa drugs, because of the competition between the sulfa drugs and para amino benzoic acid in blood agar. Since sulfa drugs are concentrated in the urine, they are usually the drugs of choice for urinary-tract infections, and probably are the best choice for treatment when the urine culture has not been completed. Some years ago, the Pfizer Company kindly provided me a supply of tetracycline and sulfa drugs to give to alternate cases. The results favored the less-expensive sulfa drugs as a blind choice, but there were some cases, of course, that responded only to tetracycline.

Pseudomonas is an organism which unfortunately is becoming increasingly common as a urinary-tract invader. This organism is almost invariably resistant to all antibiotics except polymyxin B. Thus, we have to face the agonizing de-

cision of whether the pseudomonas or the polymyxin will be the more harmful to the kidneys. There are cases of such severity that polymyxin is obviously justified, and occasional cases where it is obviously too toxic, but at the present time this infection is generally a very unsatisfactory one to treat.

ALLERGY

I have left to the last the subject of allergy to antibiotics. As a problem, it is bad and getting worse. Scarcely a week passes when a busy practitioner doesn't find a patient who is allergic to an antibiotic—usually penicillin. There is general agreement that topical, local application is more likely to produce allergy than is systemic or oral treatment, and I believe we should do our best to persuade our ophthalmologist and dermatologist colleagues to switch to generalized treatment.

As a profession, I believe we must gather together and take an oath in blood to protect and assist one another in the battle with the public over the issue of a "shot of penicillin to knock a cold." The pediatricians must hold firm in the face of the embattled mother who "wants junior to have Terramycin for his measles," and the surgeons must rely upon aseptic technics so that they can abandon postoperative antibiotics. There are a few areas, like bacterial endocarditis, where we tend to give too little antibiotic, but in general our great sin is in giving too much.

Let me remind you, in closing, that we have lost control over antibiotics and that the drug companies have literally hundreds of millions of dollars at stake in freeing these drugs from prescription control. The barriers are completely down in the area of "antibiotics by the ton" in animal husbandry. The antibiotics in milk and meat are a growing menace to the allergic patient. Salk vaccine has both penicillin and streptomycin in it, and I am told that injecting the cow with penicillin before slaughter prevents the meat from spoiling. All fresh fish now are laced with tetracycline. The allergic patient simply hasn't a chance in the face of this constant exposure to hidden antibiotics, and it may be that the greatest use *and* abuse of antibiotics has completely bypassed the medical profession. It may be that our greatest contribution to this phase of the problem may not be with our patients. Rather, it may be with our senators. Since the problem is getting so far out of hand, it is difficult to imagine any agency other than the government that can do a great deal to change it.

Civil Defense to Be Discussed in Miami Beach

Some of the most basic yet most controversial areas of civil defense and survival will be topics for discussion during the Eighth Annual National Civil Defense Conference, which is to be held in Miami Beach on Saturday, June 11, just prior to the opening of the AMA Annual Meeting. The one-day conference is sponsored by the AMA Council on National Security.

This year's meeting will be presented by the Medical Department of the U. S. Navy under the direction of Rear Adm. Calvin B. Calloway, MC, assistant chief of the Bureau of Medicine and Surgery for Research and Military Medical Specialties.

The opening session will be addressed by Dr. E. Vincent Askey, Los Angeles, the AMA president-elect.

An exploration of the problem of radiation injury and the current status of medical management with emphasis on diagnosis, nursing care, treatment and current research in the total problem of mass radiation casualties will open the morning program.

This will be followed by the first scientific report of group reaction to isolation and confinement. The report comes as a result of the study of environmental conditions sustained by 97 persons while undergoing two weeks of underground confinement.

The afternoon session will stress the importance of community preparedness as the basis for national survival. A film review of recent disasters will be presented, and there will be a running commentary on the special medical problems involved in these situations.

As a conference highlight, medical units of the Second Marine Division will erect the components of a 60-bed field hospital in an area adjacent to the hotel, and will demonstrate modern technics of teaching first aid and self aid in the event of a disaster.

A number of exhibits and displays will support the theme of the conference. Special exhibits will be devoted to bone-marrow procedures, blood storage, training technics, publications, visual aids and training facilities.

For further conference information, write to Mr. Frank Barton, secretary, AMA Council on National Security, 535 North Dearborn Street, Chicago 10.

Borderline Electrocardiograms In Healthy People

G. WILLIAM JONES, M.D.

DES MOINES

THE ELECTROCARDIOGRAM has found increasing usefulness as an adjunct to routine physical examinations, particularly in individuals over the age of 40. It is important, therefore, for us to recognize what constitutes a normal tracing. In the interpretation of these electrocardiograms, confusion may arise because of borderline findings, since as is always true in laboratory studies, a certain area exists in which normal findings overlap the abnormal.

The medical staff of the Equitable Life Insurance Company of Iowa has conducted a preliminary survey of electrocardiograms on employees of the Company, in order to gain additional insight into this problem. Particular emphasis has been put upon the variations in the electrocardiograms which might be considered abnormal or questionable findings according to present criteria of interpretation.

MATERIAL

The survey included the electrocardiograms of 823 employees who had undergone pre-employment and annual physical examinations within the past three years.

Of those 823 employees, 794 have been found to have *no clinical evidence of high blood pressure, heart disease or arteriosclerotic disease in any form.* It is these 794 who were finally included in the study. I have separated these individuals into two groups. In those below 40 years of age, the likelihood of latent arteriosclerotic disease can be regarded as minimal; in the group over 40 years of age, the electrocardiogram is most often used as an adjunct in routine health examinations.

TABLE 1

AGE AND SEX DISTRIBUTIONS OF EMPLOYEES SHOWING NO CLINICAL EVIDENCE OF HYPERTENSION, HEART DISEASE OR ARTERIOSCLEROTIC DISEASE

	Men	*Women*	*Total*
Below age 40	112	506	618
Above age 40	91	85	176
Total	203	591	794

Dr. Jones presented this paper at a meeting of the Library Club, in Des Moines.

As can be seen from the figures in Table 1, a large number of these individuals were young women, and in fact 471 (59 per cent) of the total number of employees included in the study were women below the age of 29.

RESULTS

Of these 794 individuals, 117 showed some abnormality. The pathologic findings were distributed as follows between the two groups:

TABLE 2

DISTRIBUTION OF ABNORMALITIES BETWEEN THE TWO AGE GROUPS

	Individuals	*Abnormalities*
Below age 40	74 (12 per cent)	87
Above age 40	43 (25 per cent)	52
Total	117 (15 per cent)	139

The following conduction defects were indicated:

PR interval. There were only five such defects, and in all of these instances the PR interval was 0.22 sec. The individuals were two girls under 25 years of age, and one man and two women above the age of 40. There was no history of rheumatic fever in any of them. I should not attach any great significance to these findings, but the PR intervals, as noted, are above the normal range often given for this measurement.

Bundle branch block. There was one instance of the development of an intermittent left bundle branch block in a woman 50 years old.

There were 30 individuals showing changes suggestive of incomplete right bundle branch block (Table 3).

The fact that so many of these cases were in younger girls would seem to emphasize the feeling that this finding often results from a physiological variation from normal.

Arryhythmias were indicated in a considerable number of employees. There was one instance of a Wolff-Parkinson-White syndrome in a young girl who had no history of paroxysmal tachycardia.

There were 23 instances of auricular and ventricular premature beats, as shown in Table 4.

TABLE 3

AGE AND SEX DISTRIBUTIONS OF EMPLOYEES WITH EKG EVIDENCE OF RIGHT BUNDLE BRANCH BLOCK

	Men	*Women*	*Total*
Below age 40	5	17 (15 under age 29)	22 (3.6 per cent)
Above age 40	5	3	8 (4.5 per cent)
Total	10	20	30 (3.8 per cent)

TABLE 4

AGE AND SEX DISTRIBUTIONS OF EMPLOYEES WITH EKG EVIDENCE OF AURICULAR AND VENTRICULAR PREMATURE BEATS

	Men	*Women*	*Total*
Below age 40	0	6	6 (1 per cent)
Above age 40	5	12	17 (9.7 per cent)
Total	5	18	23 (2.9 per cent)

In this particular study, there was a predominance of this finding among the women. It is to be noted, however, that this finding was more frequently encountered in persons beyond 40 years of age. In addition, among the 29 individuals who had been excluded originally from the study because of the presence of heart disease or high blood pressure, there were five additional instances of premature contractions.

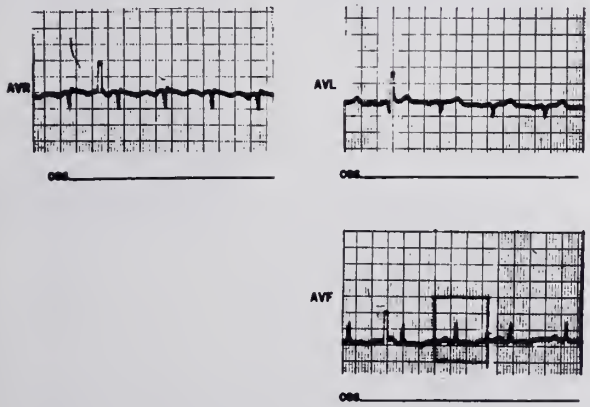


Figure I. This shows an example of an inversion of the T wave in lead AVF in a 17-year-old.

Dextrocardia. There was one instance in a young girl.

Changes in P waves. There was but one instance of a questionable finding in the P waves. This consisted of a notching and widening of the P wave to the uppermost limits of normal (0.11 sec.) in a 40-year-old woman without evidence of significant heart disease.

Changes in the QRS complexes. There were eight instances of peculiarities of the QRS complex—questionable Q waves or notching of the QRS complex, or other peculiarities of the QRS complex that might, by some, be considered questionable. Seven of these occurred in the age group below 40—all in women, and six in girls in their early 20's.

High voltage. Many criteria have been set up in an effort to determine the presence of left ventricular hypertrophy. Some of these standards have been based on the artificial measurement of the QRS complexes. Some of these criteria are as follows: The sum of the R wave in lead V5 or V6 and the S wave in lead V1 or V2 is greater than 35. The height of the R wave in lead AVL is greater than 12 in the presence of a horizontal heart. The height of the R wave in lead AVF is greater than 20 in the presence of a vertical heart. I thought it would be interesting to see how many of the electrocardiograms in our series showed measurements exceeding these criteria. There were, in fact, 16 individuals whose electrocardiograms showed changes fitting these criteria (Table 5).

None of these electrocardiograms showed the RST segment or T wave changes diagnostic of left ventricular hypertrophy. It is true, however, that among the 29 individuals excluded from this study, some did present similar electrocardiograms in the presence of significant elevation of blood pressure and heart enlargement.

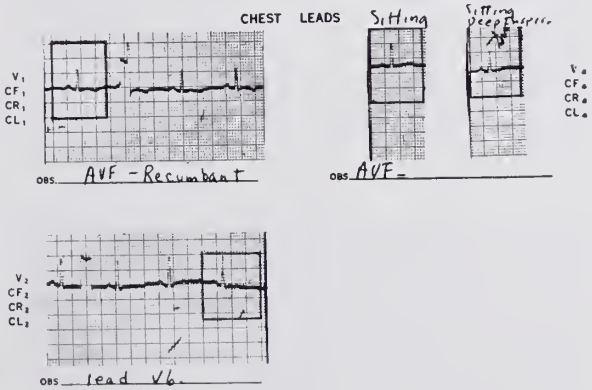


Figure 2. An inversion of the T wave in AVF, and flattening of the T wave in lead V6. Note the changes in the T wave in AVF with changes in respiration and position. These changes occurred in an 18-year-old girl.

TABLE 5

AGE AND SEX DISTRIBUTIONS OF EMPLOYEES WITH SUPPOSED EKG EVIDENCE OF LEFT VENTRICULAR HYPERTROPHY

	Men	*Women*	*Total*
Below age 40	6	1	7 (1.1 per cent)
Above age 40	5	4	9 (5.1 per cent)
Total	11	5	16 (2.0 per cent)

Low voltage. When reporting the total number of abnormalities encountered in this study, I did not include the individuals exhibiting "low voltage" because I felt that the number involved would place undue weight on this figure. There were 60 instances of "low voltage" in the unipolar limb leads alone, or in the unipolar limb leads and standard leads. By this I mean that the measurement of the total amplitude of the QRS complex did not exceed 5 mm. in any lead mentioned.

TABLE 6

AGE AND SEX DISTRIBUTIONS OF EMPLOYEES EXHIBITING "LOW VOLTAGE"

	Men	*Women*	*Total*
Below age 40	7	39 (36 under age 29)	46 (7.5 per cent)
Above age 40	6	8	14 (7.9 per cent)
Total	13	47	60 (7.6 per cent)

RST segment changes. There were five such instances. Two occurred in the presence of a tachycardia, two in the below-40 age group, and three in the above-40 age group. These were borderline changes.

T wave changes. There were 36 individuals who showed various changes in the T waves.

TABLE 7

AGE AND SEX DISTRIBUTIONS OF EMPLOYEES EXHIBITING T WAVE CHANGES

	Men	*Women*	*Total*
Below age 40	3	20 (19 below age 29)	23 (3.7 per cent)
Above age 40	6	7	13 (7.4 per cent)
Total	9	27	36 (4.5 per cent)

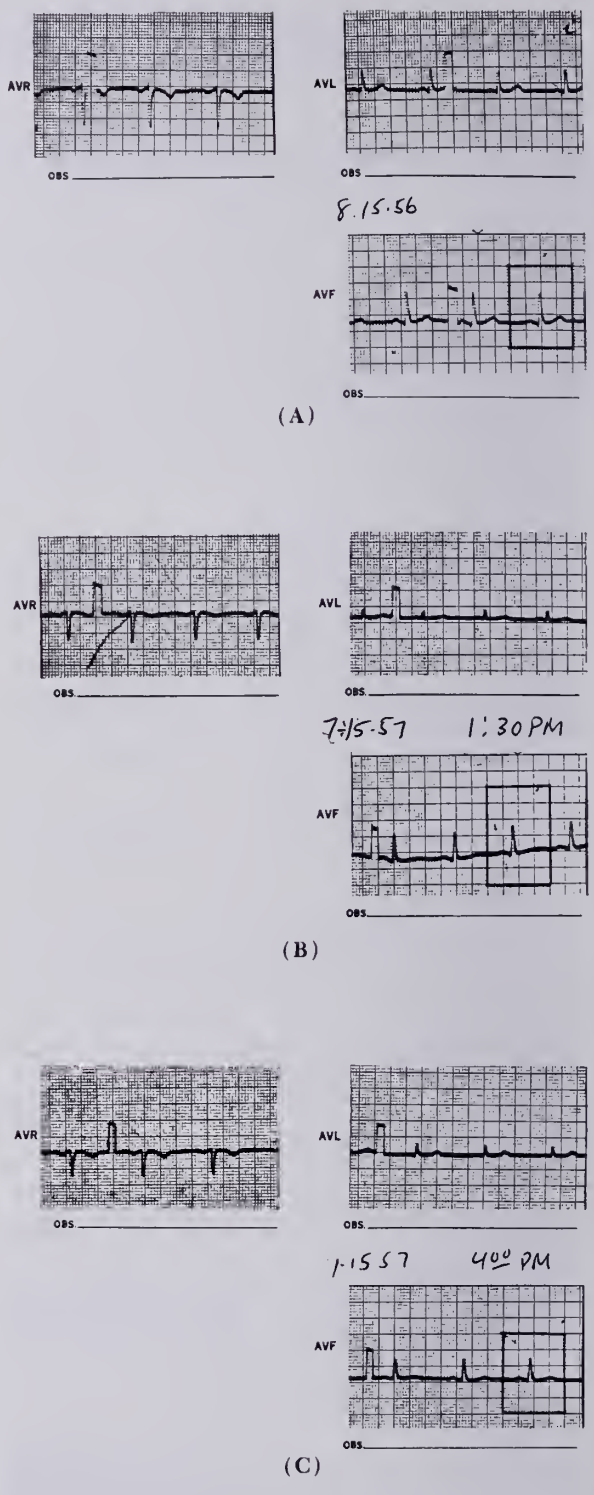
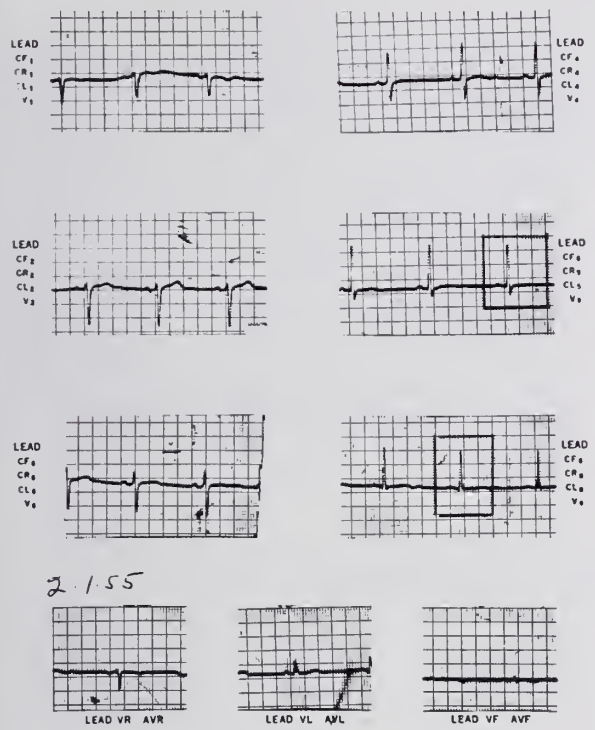
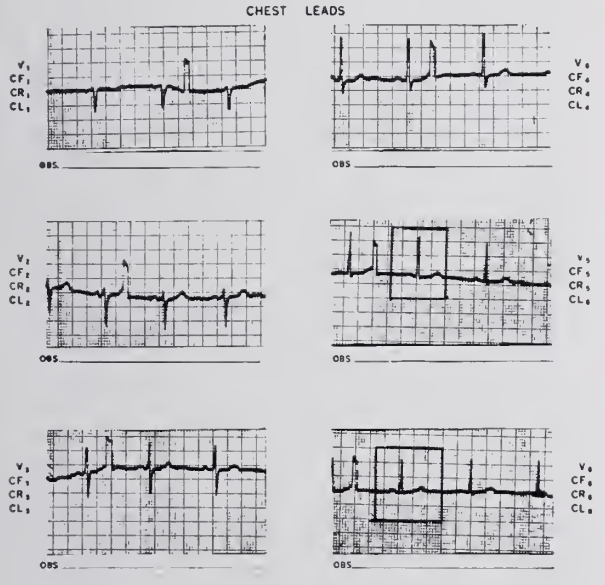


Figure 3. (A) This is a normal tracing dated August, 1956, showing normal amplitude of the T waves in unipolar limb leads. (B) This tracing was taken at 1:30 p.m. on July 15, 1957, after a rather heavy noon meal. Note the flattening of the T wave in lead AVF. (C) This is another electrocardiogram taken late in the day (4:00 p.m.), showing an improvement in the amplitude of the T wave in lead AVF.



(A)



(B)

Figure 4. Note the flattening of the T wave in leads V5 and V6. Two years later, a tracing shows a perfectly normal amplitude of the T waves. This individual has no symptoms suggestive of heart disease.

It is well known that T wave changes can occur because of many factors other than those related to heart disease. Among the phenomena that have been implicated are positioning of the heart, hyperventilation, taking of food, changes in respiratory level, exercise and rapid heart rate, anxiety neurosis, and sternal depression (pectus excavation), to mention a few. Changes similar to these, however, have been seen as residuals of infarcts, or in patients with angina without other evidence of infarction. In some instances, these changes may be evidence of cardiac disease, perhaps latent; in others, they undoubtedly are not. It should be noted, incidentally, that there was a higher incidence of these changes in the over-40 group.

DISCUSSION

An interesting study by Zukel *et al.*, which may have some relationship to this problem, involved the tracings of 1,000 males ranging in age between 40 and 54 years.* The electrocardiograms were interpreted by three individuals without regard for clinical data. When a correlation was made, it was found that there were seven to 16 per cent "false positives." The "false positives" were individuals exhibiting some questionable or abnormal electrocardiographic finding without evidence of heart disease. These individuals were then observed over a period of five years and were compared with a similar group whose electrocardiograms were normal initially. The rate of development of new heart disease was found to be 30 per 1,000 in the normal group, and 150 per 1,000 in the "false positive" group. A study such as mine cannot furnish "proof," as it were, that the specific findings noted are "normal" or "abnormal" in each given case. We know that we cannot separate the normal hearts from the impaired hearts by means of the electrocardiogram alone.

I believe the following general conclusions can be drawn:

1. There are a variety of questionable deviations from normal which can be associated with the presence of heart disease, but which can also be demonstrated, in this and other similar studies, to exist in persons with negative cardiac backgrounds and of ages at which latent heart disease would not ordinarily be suspected.

2. The electrocardiogram, in order to reach its maximum utility, must be considered in the same light as other laboratory findings. That is to say, it must be correlated with all available clinical data if one is to reach a sound decision in a given case. It is essential that individuals undergoing routine health examinations be afforded the valuable aid of the electrocardiograph in detecting the

* Zukel, W. J., McGandy, R. B., Doyle, J. T., and Reynolds, R. W.: Sensitivity of electrocardiography in detection of heart disease (Abst.). CIRCULATION, 18 pt. 2:804, (Oct.) 1958.

presence of organic heart disease, but they must also be protected from an erroneous diagnosis of heart disease resulting from an overzealous interpretation of electrocardiograms.

3. If an individual does show such borderline changes at a time when he is exhibiting symptoms suggestive of coronary or other forms of heart disease, it would undoubtedly be of great help to him and to his physician to know that these changes had been evident for a considerable length of time, having been discovered during a routine physical examination in the past. This point, in itself, constitutes one benefit that might result from making an electrocardiogram in conjunction with giving a complete physical examination to a young individual.

SUMMARY

In summary, I have presented a preliminary study of the electrocardiograms of 794 individuals who have no history of heart disease, high blood pressure or arteriosclerotic disease. Among these individuals, 12 per cent of a group of 618 individuals under the age of 40, and 25 per cent of a group of 176 individuals over the age of 40 exhibited changes of a questionable character in their electrocardiograms. Among these changes, the most frequent and most difficult to evaluate were T wave changes which occurred in 3.7 per cent of the below-40 age group and in 7.4 per cent of the above-40 age group. The various factors which might lead to these changes and the possible significance of these findings were discussed.

Accidents in Children

LEE FORREST HILL, M.D.

DES MOINES

SOME OF YOU may be surprised to learn that accidents now head the list of causes of death among children from one to 15 years of age. In fact, accidents are the most frequent of the causes of death for all persons up to age 35, but it is not my purpose in this paper to include a discussion of adults' mishaps.

During 1955, accidents claimed the lives of 14,500 children under 15 in the United States. For each child killed, furthermore, it is estimated that 10 others are permanently disabled and an additional 100 are less seriously injured. This tragic situation can be dramatized still further by a different approach. In the time it will take you to read this sentence, one child in the U. S. will be injured in an accident. In the next four minutes, another child will be permanently crippled by an accident, and within 40 minutes a child will die as the result of an accident. One-half of all the boys and one-fourth of all the girls of school age who die each year die from accidents. In the population as a whole last year, there were 95,000 accidental deaths and some 10,000,000 injuries, with an estimated cost to the public of over 11 billion dollars.

I include this statistical capsule in my introduction to emphasize the magnitude of the problem facing the American people. One's immediate reaction may well be: "So what!—What can be done about it? Are not these accidental deaths and injuries the price we have to pay for our modern advances in machines, in speed, in new devices and in poisonous substances such as insecticides that are to be found on the premises of most homes?" The answer supplied by many authorities who are giving serious consideration to this problem is that 80 to 90 per cent of these deaths and injuries are preventable, and that it is high time we set about the business of getting the preventive machinery in motion.

To those of you who might think this is but over-enthusiastic optimism, incapable of realization, might I say that I would agree with you if it were not for one thing. I look back over the last quarter-century and view the miracle of what has been accomplished in controlling infections and the other diseases of mankind, and I have to tell myself that nothing is impossible. Admittedly, the task of preventing deaths and injuries by accidents presents more of a challenge than has the conquest of disease, but it is a challenge that must be accepted, and it is one that will require the participation and cooperation of all citizens—lay and professional alike.

MOST ACCIDENTS OCCUR TO PRESCHOOL CHILDREN

Now, let me turn to the main purposes of this presentation: first, to examine in greater detail the causes of these accidents among children, and second, to say a little more about some of the steps which are being taken to reduce their incidence. Curiously enough, the highest incidence of accidents among children is in the age group under five years, especially among youngsters between two and five. Studies have shown that the majority of accidents among these preschoolers oc-

cur in and about the home, the bedroom and the kitchen being the two most dangerous parts of the house. One usually thinks of children in this age bracket as being under close parental supervision and having only a minimum of opportunities for accidents. Apparently, such is not the case. If preventive efforts were to be concentrated solely on this preschool age group, the total incidence of accidents could be significantly reduced.

A breakdown of the causes of fatal accidents among children in different age groups may be of some interest. First, let us consider children under five years years of age. As one might suspect, motor vehicles are the single greatest cause of death. A large percentage of these fatal motor vehicle accidents occur among children playing in the streets near their homes, and in driveways belonging either to their parents or their neighbors. Vehicles backing out of driveways are specially dangerous.

Burns and conflagrations account for about one-fifth of the fatal accidents among children between one and four years of age. Studies have shown that the four main causes of fatal injuries of these sorts are (1) ignition of clothing, (2) direct contact with flame, hot ashes or hot stoves, (3) gasoline or kerosene burns, and (4) hot liquids such as water or grease. Burns deserve an additional word in regard to their non-fatal possibilities. Even the survivors of severe burns, if of the third-degree variety, must undergo many weeks and sometimes months of hospitalization. The immediate threat to life comes from loss of body fluids leaking out through the destroyed protective skin. Blood, plasma and other replacement fluids must be given directly into the vein in surprisingly large quantities to overcome this hazard. If the patient safely weathers this threat, a second danger arises in the form of bacterial invasion of the necrotic tissues. Here the antibiotics and chemical drugs find one of their greatest fields of usefulness. Many children that formerly succumbed to infection are now being saved because of the availability of this form of therapy.

But the battle is not over for the burned child who has come safely through these two hazards. Next comes the task of replacing the destroyed skin to prevent scarring and deformity. Frequently, many trips must be made to the operating room, where under general anesthesia, debridement of the destroyed tissues is carried out and skin grafts are put in place.

It seems safe to say that no other form of accident entails so much suffering on the part of the patient, requires so much meticulous care on the part of the attending personnel—the doctors and nurses—and runs up so large an expense as do burns. The total bill may be in the thousands of dollars. Some conception of the magnitude of the problem can be had from a study carried out at the North Carolina Orthopedic Hospital. At that institution, 457 burned children had a total hospital stay of 90,992 days, or an average of slightly under 200 days for each child. At current hospital rates of $14.00 per day, the cost per child would be $2,800. And all of this may stem from a small child's curiosity about matches carelessly left within his reach in the home. About half of the burns in children are caused by ignition of clothing. Although I shall speak of it again later, it may be appropriate for me to mention here that Congress has recently passed the Flammable Fabrics Act, which is intended "to prohibit the introduction or movement in interstate commerce of articles of wearing apparel and fabrics which are so highly flammable as to be dangerous when worn by individuals and for other purposes."

Drownings run a close second to burns as a cause of accidental deaths among young children, particularly one and two year olds. About 400 deaths at these two ages are reported annually in the U. S. Many of these fatalities occur in ponds or pools near the children's homes, or even in their own back yards. The present popularity of back yard swimming pools has resulted in a great increase in the incidence of child drownings, and this trend is likely to continue. All of us, from newspaper publicity, are well aware of the hazard of the outdoor cistern. The existence of many of these are unknown until a child falls through the decayed wooden cover. Even the bathtub is a source of danger to young children, for reports of drownings in bathtubs are not infrequent.

Falls in the home are a common cause of fatal injury to preschool children. Among toddlers, falls downstairs and out of windows are the most frequent cause of fatal injury. Younger children have been killed from rolling off a bed or out of a crib when the side has carelessly been left down. Falls from high chairs, from climbing over the tops of cribs and from tables and other high places in the home have all contributed to the fatality rate.

Aspiration or swallowing of foreign bodies accounts for about four per cent of accidental deaths in the preschool group of children. It is amazing what these youngsters will put into their mouths and attempt to swallow. Among the commonest are open safety pins, tacks, pins, needles, Sunday-school pins, buttons, beads and a host of similar articles. Peanuts and nuts of other sorts aspirated into the lungs pose an additional threat besides that of mechanical obstruction. Oils in the nuts are irritating to the pulmonary tissues, and a chemical pneumonia usually complicates the problem.

In the past, mechanical suffocation was considered a common cause of accidental deaths. A majority of these accidents occurred in infants of three and four months of age, and the usual story was that the infant seemed perfectly well at bedtime but was found dead when the parents looked into the crib in the morning. Aspiration of a feed-

ing into the lungs, a mechanical obstruction of the breathing passages by a loose pillow or blanket, or a face-down position were the most commonly ascribed causes for the unexpected death. More recently, however, careful autopsy examinations have disclosed that these infants have not died of suffocation, but from an overwhelming infection of the lungs referred to as interstitial pneumonitis. A contributing factor is thought to be the poor antibody-producing ability of infants in this age period. It has been pointed out, further, that if mechanical suffocation were the main factor, one would expect the greater incidence of deaths among the youngest infants, rather than among those that are three or four months of age.

Although mechanical suffocation has been shown to be a relatively infrequent cause of accidental death, nevertheless it is suggested that parents take such simple and reasonable precautions as the following: (1) Use a firm mattress in the baby's crib, and avoid bolsters, pillows, and loose blankets which may tend to enclose the crib and shut off air. (2) Use sweaters and other clothing instead of bed coverings for very active youngsters. (3) Discontinue the use of sleeping garments that restrain movement after the baby reaches two or three months of age. (4) Abstain from the use of harnesses or similar devices.

Poisoning in the home accounts for approximately 5 per cent of all fatal accidents among children under five years of age. For each death, there are many hundreds of non-fatal poisonings. In a Washington, D. C., study over a four-year period, there were only two deaths among 250 children admitted to a children's hospital because of poisoning. The two and three olds are the most frequent victims. This is the age period of intense motor activity, great curiosity, and yet insufficient ability to distinguish the harmful from the safe.

The variety of poisonous agents voluntarily swallowed by children is astounding. Only the barest outline of the more common ones can be given here. A report by the Chicago Poison Control Center on its first 375 cases of poisoning showed that 168 (45 per cent) of them were due to swallowed medications. Included were aspirins, laxatives, sleeping pills and other sedatives, liniment, potassium permanganate, boric acid solution, and other common medicines for either internal or external use. Eighty-four (22 per cent) of the cases resulted from ingestion of cleaning fluids, and polishing and sanitizing agents. Included were bleaches, lye, furniture and floor polish, cleaning fluid and Lysol. Forty-six (12 per cent) of the children had drunk petroleum distillates, which include kerosene and gasoline. Forty-one (11 per cent) had ingested pesticides used for rodent and insect extermination. There were 16 cases of turpentine poisoning and 20 others of miscellaneous varieties.

Aspirin is the most common single cause of accidental poisoning in children. Fortunately, the ratio of deaths to toxic ingestions is low, but deaths do occur. Only a year or so ago, three infants under one year of age were reported by a St. Louis hospital to have died in a single year in that institution from aspirin poisoning. Parents, physicians and manufacturers must all share the blame. Aspirin is a common household remedy purchasable almost anywhere. In attempting to persuade young children to swallow an aspirin pill, parents often offer it as candy. Manufacturers have made this easy to do by marketing aspirin in pleasant-tasting cubes or tablets. What more natural, then, for the toddler who finds a bottle of these "candies" carelessly left within his reach, than to consume the entire bottle?

Physicians are culpable for their failure to prescribe strict dosage limitations. I recall vividly an incident that occurred a few years ago and that involved a two-year-old child who had traveled by plane from the West Coast to Des Moines. He was ill with a mild fever at the start of the trip, and his physician had prescribed aspirin every three hours without being specific about the dose. Delays were encountered on the way, and when the child arrived at Blank Hospital, he was in a serious condition indeed. His fever, instead of being controlled by the aspirin, had soared to high levels as a result of the dehydration secondary to forced ventilation. He was in serious acidosis, and the salicylate content of his blood was found to be at a high toxic level. Fortunately, he recovered following the administration of suitable intravenous therapy.

The danger that aspirin poses as a cause of accidental poisoning in young children resulted, in 1954, in the calling of a conference by the Food and Drug Administration attended by representatives of manufacturers, toxicologists and pediatricians. The following recommendations were adopted there:

1. Labels of salicylate-containing medicinals should bear the statement, "Warning: Keep Out of Reach of Children."
2. Labeling should withhold specific dosage recommendations for children under the age of three, and instead should state, "For children under three, consult your physician."
3. Uniform strength of children's aspirin should be established, the preference being for 1¼ gr. per dosage unit, instead of the present range of 1 to 2¼ gr. per dosage.
4. Manufacturers should hold down the quantity per package unit, and develop containers that resist opening by small children.
5. Wider and more effective educational technics should be used to inform physicians, pharmacists and consumers of the hazards involved in the accidental ingestion of salicylate-containing preparations.

It is gratifying to note that these recommendations have all been carried out. Nevertheless, aspirin continues to be the commonest type of poisoning encountered at our Poison Information Center at Blank Hospital, Des Moines.

Kerosene poisoning deserves a special comment. Although considerably less frequent than aspirin poisoning, its toxic effects are equally serious. Some 200 children under five years of age die from it each year in the United States. The rate is some six times greater among colored children than among white. Its lethal effect is due to the chemical pneumonia that occurs in most cases of kerosene ingestion.

Lead is another potent poison which either kills young children or produces in them a chronic illness that is oftentimes of an obscure nature. Sometimes, in those who live, there is permanent brain damage. Lead poisoning occurs most frequently in the slum areas of large cities, where houses are old and paint with a high lead content peels and loosens, especially around window sills. Children pick up those loose particles and eat them, with the result that toxic amounts of lead accumulate in their systems. The symptoms produced are likely to simulate those of brain tumor, with headache, vomiting, papilledema, convulsions and weakness of the extremities manifested by wrist or toe drop. Since the body's mechanism for excreting lead is quite inefficient, the disease becomes chronic, and may last for weeks or months unless detected. Diagnosis rests first upon suspecting what is wrong, and then carrying out tests. An x-ray of the long bones of the leg may show a characteristic "lead line" running transversely across the distal end of a bone such as the tibia. Lead may also be detected in the urine or in the blood by suitable chemical examinations. Chelating compounds such as BAL (British-Anti-Lewisite) and EDTA (ethylene-dramine-tetra-acetic acid) are employed to delead patients found to have lead poisoning. The compounds have the capacity to bind the lead and excrete it through the urine.

Some idea of the magnitude of the lead-poisoning problem may be conveyed by citing statistics from a few large cities. In 1953, Baltimore had 49 cases with 6 deaths; Boston had 14 cases with no deaths; Chicago had 21 cases with 5 deaths; St. Louis had 71 cases with one death; and New York had 24 cases with 11 deaths.

Not all of these cases resulted from eating paint from old houses. Other sources were paint on furniture, paint on toys, and the lead nipple shields that were commonly used some years ago as a treatment or protection for sore nipples. On occasion, too, old battery cases were used for fuel or burned in trash fires, and children who played in the ashes ingested toxic doses of lead. Lead nipple shields have been eradicated, and the American Standards Association has recommended that a level of 1 per cent or less of lead be considered safe for use on toys, furniture or interior surfaces that children might chew.

ACCIDENTS ALSO CAUSE MANY DEATHS AMONG OLDER CHILDREN

So much for the causes of fatal accidents and of accidental injuries in children under five. Only a few words need be added about school-aged children between five and 15. Accidents annually take the lives of some 6,000 children in this age bracket. They account for one-third of all deaths at the elementary school ages, and are the greatest threat to the lives of American youngsters. Here again, mishaps from motor vehicles are the leading cause of accidental death, with drownings a close second. Burns and conflagrations rank third, and firearms accidents occupy fourth place. As might be expected, deaths from poisoning and from choking on foreign bodies are not very numerous in this age group, for these children have largely abandoned the practice of putting everything into their mouths, and also they have grown old enough to have some understanding about the dangers of indiscriminate ingestion of unknown substances.

In approaching the problem of accident prevention among children, one must take a number of factors into account. The actual causes of accidents, some of which have been enumerated, are easily ascertained, and can be tabulated and classified as meticulously as any one desires. For example, a child drowns in a pool in the back yard, or ingests a lethal dose of aspirin. The cause of death is obvious, by *why* the accident occurred is a much more difficult question to answer. The factors involved include the nature of the child himself, his stage of development, his parents' attitudes about accidents, and the physical environment in which the child is being reared.

The young child is immature and inexperienced, and cannot be expected to understand the meaning of such terms as *hurt* and *hot*. For the first one or two years, he must be supplied with complete protection by his caretakers. Gradually, as he experiences numerous minor accidents from falls and from touching things that are sharp or hot, and from parental training and supervision, he begins to outgrow his need for complete protection. But there remains the need for preventing the serious, potentially fatal accident. Not only is it important to know the common or most likely hazards for children of a given age period, but one must also know why, at that particular age, the child is susceptible to a particular type of accident. The nature of the toddler age, for example, includes a desire to climb, to explore and to learn about objects by putting them into the mouth. Hence, the danger from falls and poisonings among the one to three year olds. On the other hand, the nature of the 10 to 14 year old boy includes adventuresomeness. He climbs on the

rooftops, starts up a bonfire and jumps through the flames, or experiments with firearms that may or may not be loaded. The toddler requires mainly protection and supervision, whereas the older boy's need is for education, since his field of operation away from his immediate home environment has become so broad that his parents can no longer provide him constant protection and supervision, even if such surveillance were desirable.

The question of accident-proneness is raised in most discussions of accidents, whether of children or of adults. What studies are available on the subject seem to indicate that some children are accident-prone. The child who has repeated accidents seems to be overactive, restless and impulsive. He tends to want to be older than his age, and seems not to get a feeling of security at home. He tends not to retreat from dangerous situations, and he becomes impulsive under stress. Children in the non-accident-prone group appear to be more timid and submissive, and to come from more closely united family groups.

MUCH IS BEING DONE TO PREVENT OR MINIMIZE ACCIDENTAL INJURIES

Perhaps this is sufficient about the types of accidents among children, and why they occur at certain age periods. Now, let me turn to what is being done in an attempt to reduce their incidence. Most dramatic is undoubtedly the establishment of poison control centers or poison information centers in cities throughout the U. S. The first of these was set up in a Chicago hospital in 1953, as a result of the efforts of the Committee on Accident Prevention that the American Academy of Pediatrics had created in 1950. So successful was this first venture and so rapidly did the idea take hold that there are now more than 200 such centers in operation in the U. S.

The first such center in Iowa was established at Raymond Blank Memorial Hospital for Children, in Des Moines, in 1956, under the joint sponsorship of the State Department of Health, the Iowa State Medical Society and the Iowa Methodist and Raymond Blank Hospitals. Sub-centers have subsequently been established in a number of other cities throughout the state. All of them operate on a 24-hour basis. Their primary function is to furnish information to any physician about a poison that one of his patients may have swallowed.

To provide this service, each center has at hand a source of accurate information about the toxic ingredients in some 250,000 brand-name chemical products currently available for home, industrial and farm use. In addition to factual data about the constituent chemicals, up-to-date information is also available, upon request, about the first-aid and medical treatment of poisoning. Thus, any physician in this community or anywhere throughout the state can get, in the time it takes to make a phone call day or night, accurate information about the poisonous ingredient in a commercial product, the toxic effect produced, and what can or should be done in the way of treatment. In April, 1957, a National Clearing House for Poison Control Centers was established by the U.S.P.H.S., in Washington, D. C. This Clearing House collects data from the local centers, and in return makes available to them information about new products and about the composite experience of all the centers.

Although the establishment of these poison control or poison information centers has been the most obvious and best publicized phase of the work done by the Academy's Committee on Accident Prevention, the group has nevertheless been responsible for many other noteworthy advances designed to lessen the incidence of accidents. The Academy, a national organization of some 6,000 members, has sub-committees on accident prevention in nearly every state of the Union. Some of these subcommittees have been extremely active in their local areas in enlisting the interest and cooperation of various groups and individuals. Educational pamphlets have been prepared for distribution to parents and children. Physicians have been urged to include in their advice to parents, at some one of their visits during the infant's first year, a discussion about the prevention of accidents, and a check list has been prepared for physicians to give to parents for making sure that the child's environment has been made as free as possible of hazards.

The Academy's national committee has also sought the cooperation of other national organizations. For instance, the American Standards Association was requested to establish safety standards for (1) inflammability of textiles for children's clothing; (2) the labeling of paints and other coating materials to discourage the use of toxic substances on furniture and toys used by children; (3) the design of harnesses and sleeping garments to avoid strangulation or suffocation; (4) the design and manufacture of wooden furniture, baby carriages, strollers, and wheeled or other toys to minimize the possibility of injury resulting from their use. Considerable progress has already been made on those projects. The American Standards Association has enlisted the aid of the National Fire Protection Association in studying the types of clothing associated with burns in children, with a view to the designing of non-inflammable or at least less flammable children's clothing on a national scale.

Early in its career, the Academy's Committee on Accident Prevention polled the Academy's membership, which at that time numbered some 3,000 pediatricians, to learn the types of accidents that they most commonly encountered in their practices. When it was learned from the survey that poisoning was the most common accident reported,

and that of the poisons aspirin headed the list, the Committee sought the aid of the Food and Drug Administration, with the result that the meeting of aspirin manufacturers, toxicologists and pediatricians previously referred to was called.

The Academy of Pediatrics is by no means the only national organization actively engaged in seeking ways and means of attacking the accident problem. Among others are the National Safety Council, the U.S.P.H.S., the U. S. Children's Bureau, the AMA and the American Public Health Association, to name only a few of the more outstanding. In addition, a number of state and city health departments include accident prevention among their activities. All of these organizations have two primary objectives. One is research, motivated by the desire to learn more about the "why" and about the circumstances under which accidents occur; the other is education, designed to inform people about what has already been learned.

In closing, I suggest that you may be interested in a report published in a recent issue of PEDIATRICS which illustrates the type of research investigation now going on in an attempt to save children's lives.* From time to time, all of us have seen newspaper accounts of children who have perished from being trapped in ice-boxes, refrigerators and freezers. The age range has been from two to nine years, with the peak between three and six. Boys have far outnumbered girls. Children enter refrigerators singly or in groups. In one instance four, and in another case five children died together, and a number of cases have been recorded in which two children were fatally trapped together. Some of the refrigerators had been abandoned in dumps, but many were in homes, temporarily out of use in empty apartments or in the process of being defrosted.

Some children use the refrigerators as playhouses, others crawl into them to hide from companions, and a few are shut into them by playmates. The horrible nature of the deaths of these children aroused the concern of manufacturers, engineers, government bodies and others. In 1955, the National Bureau of Standards and the National Electrical Manufacturers Association, representing the refrigerator manufacturing industry, were instructed to investigate safety release devices. Progress was made, and in mid-1956 Congress passed an act requiring "certain safety devices on household refrigerators shipped in interstate commerce," devices that would allow the doors to be opened easily from the inside.

In approaching their problem, the National Bureau of Standards and the National Electrical Manufacturers Associaton recognized that child behavior as well as engineering was involved. What, they asked themselves, can children be expected to do when they are trapped in a refrigerator? Do they make violent pushing efforts to get out, do they look for a familiar door knob or handle to turn, do they scream or do they simply sit quietly waiting to be let out? To answer these questions, the Children's Bureau was called upon for assistance.

An experiment was designed in which six safety devices were tested in a specially constructed playhouse type of enclosure. A total of 201 children participated. All precautions were taken to avoid psychosomatic trauma to the children while in the enclosure. By means of infrared light, photographs and motion pictures were possible. Sound transmitting devices were also set up.

Without going into further detail about the experiment, let me cite some of the conclusions from it. Three major types of behavior were observed: (1) inaction, with no effort or only slight effort to get out (24 per cent); (2) purposeful effort to escape (39 per cent); and (3) violent action both directed toward escape and undirected (37 per cent). An important result of the behavior story was the finding that when trapped, children most often try to escape either by pushing on the door through which they entered the enclosure, or by manipulating a knob release as they would a doorknob. Relatively few children pushed against the back, sides or ceiling of the enclosure. It was concluded that the data from that experiment would be valuable in developing standards for release devices such as were required by Public Law 930, which in turn would be effective for the self-release of most, but not all, entrapped children.

The fact that there are studies like this in progress for the investigation of a variety of hazards points up the fact that the problem of accidental deaths and injuries among children is not being neglected.

* Bain, K., Faegre, M. L., and Wyly, R. S.: Behavior of young children under conditions simulating entrapment in refrigerators. PEDIATRICS, 22:628-647, (Oct.) 1958.

SILO-FILLER'S DISEASE

Three North Carolina physicians, reporting in the February, 1960, issue of their state society's journal, have said that alfalfa, clover and some pasture grasses can produce silo-filler's disease.*

They theorize that heavy nitrogen fertilization, plus rapid cutting, hauling and storing of the crops, causes the liberation of more nitrogen in silos at one time, nowadays.

As preventives, they relay the suggestion of a county agricultural agent that well-ventilated horizontal silos be used wherever possible in preference to vertical ones, and that farmers avoid entering their silos within a week after filling them.

They report dramatic recoveries following the administration of corticosteroids in two cases of silo-filler's disease.

* Evans, E. G., Jr., McDonald, L. B., and Porter, R. A.: Silo-filler's disease, NORTH CAROLINA M. J., 21:59, (Feb.) 1960.

The Etiology of Athetosis With Particular Reference to Neonatal Jaundice

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NEONATAL JAUNDICE may be followed by athetosis. With the development of exchange transfusion, this sequence should be uncommon, however, and should hardly ever occur in cases of hemolytic disease of the newborn. Yet, while examining patients at the Hospital School for Severely Handicapped Children, in Iowa City, we got the impression that many cases of athetosis were still due to hemolytic disease. We therefore investigated these cases to see whether the etiological pattern has changed since treatment for hemolytic disease became available, and to determine the causes for failure of treatment.

MATERIAL AND METHODS

All patients with athetosis seen in the Hospital School between December 1, 1958, and July 1, 1959, were investigated. We examined these children ourselves, and the diagnosis was not in doubt in any of them. A detailed history was obtained from the parents of each patient. Although the retrospective approach has obvious limitations, the results obtained are of sufficient interest to warrant this report.

The ABO and Rh blood types of each mother and child were determined, and if there was rhesus incompatibility, an indirect Coombs' test was performed on the mother's serum. All these investigations were performed by one of us (D.B.).

The etiology was determined as far as possible in each patient. This was considered to be rhesus incompatibility if there was a history of severe neonatal jaundice, rhesus incompatibility between the mother and child, and a positive indirect Coombs' test in the mother's serum. A positive Coombs' test was never found in the absence of a history of severe neonatal jaundice, and this confirms the observation of Bakwin and Wiener.[1] In other cases of neonatal jaundice, ABO incompatibility was postulated where the mother is group O and the child group A or B. This is only suggestive, and certainly not conclusive evidence of this condition.

Anoxia at birth was considered a factor in all patients in whom there was a definite history of severe respiratory distress that required resuscitation.

OBSERVATIONS

The study included 54 children from 53 families. There were 24 female and 30 male patients. One or more of three probable etiological factors were present in 51 of the 54 cases. These three factors were anoxia at birth, neonatal jaundice and prematurity (Table 1).

Of the 54 children, 14 were premature. In 12 of them, jaundice or anoxia occurred, and only two instances was prematurity the only etiological factor. In this small series prematurity was important largely because of its common association

The authors, from Charing Cross Hospital, London, and the Department of Child Health at the University of Sheffield, respectively, did the work reported in this paper while they were visiting fellows at the S.U.I. Hospital School for Severely Handicapped Children, in Iowa City. Dr. Holt was a recipient of a Welcome Trust Grant and a Dickinson Travelling Scholarship from the Manchester Royal Infirmary, England.

TABLE 1

THE SUSPECTED ETIOLOGY OF ATHETOSIS IN 54 PATIENTS

Birth Weight	*Sex*	*No. of Cases*	*Neonatal Jaundice*				*Anoxia*	*Unknown*
			Rh	*ABO*	*Vit. K*	*Other*		
5½ lbs.	M	10	1	0	0	3*	6	1
or less	F	4	0	1	1*	0	2	1
Over	M	20	11*	0	0	0	9	1
5½ lbs.	F	20	5	2	0	1*	11	2
TOTAL		54	17	3	1	4	28	5
					25			

* One patient in each of these groups also had anoxia. They are included in the anoxia column also.

with jaundice and anoxia. This had already been appreciated by Polani.[2]

Anoxia at birth was the most frequently encountered factor in the histories of our patients, and occurred in 28 of them. It was the only factor in 24, and was found in combination with jaundice in two, and with jaundice and prematurity in another two children.

There were 25 patients who had severe neonatal jaundice. Seventeen of these were due to rhesus incompatibility, three to possible ABO incompatibility, and one premature infant to whom large doses of vitamin K had been given. There was no specific cause for the jaundice in the remaining four children, but three of them were premature, and the mature baby was also asphyxiated. Of the 17 cases of hemolytic disease, 12 were males—a ratio that corresponds with the observations of Diamond, Vaughan and Allen,[3] and Walker and Mollison.[11]

This study emphasizes the known dangers of hyperbilirubinemia and of large doses of vitamin K in premature infants. One premature baby received one ampule of vitamin K daily for five days, and this dose is known to be sufficient to cause kernicterus.[4]

ABO incompatibility is usually considered a mild disease,[5] and it is surprising that three of these cases may have been due to it. There is, unfortunately, no way of proving this diagnosis in retrospect.

The distribution of the patients with athetosis by year of birth is shown in Table 2. Although exchange transfusion for hemolytic disease was described by Wallerstein in 1946,[6] it was not in universal use until about 1951. Four of the 20 cases born before 1951 were due to rhesus incompatibility (20 per cent), and 13 of the 34 cases born later were due to this condition (38 per cent). Contrary to expectations, a higher and not a lower proportion of cases of athetosis in patients born in the last eight years could be traced to rhesus incompatibility.

The management of the 13 patients with hemolytic disease born from 1951 onwards has been examined in detail (Table 3). The possibility of hemolytic disease of the newborn should be anticipated in the antenatal period through the detection of mothers who are rhesus negative and whose serum contains Rh antibodies. Antenatal blood tests had not been done in four instances out of 11. Information was unavailable on two other patients. In two cases, the tests had been done but had been wrongly interpreted. In both of them the antibody titers were low, and it had been assumed the baby would not be seriously affected. Although some workers have shown some correlation between the height of the antibody titer and the severity of the hemolytic disease,[7] that correlation is only a rough one, and there never is any justification for complacency because the titer is low.

Another local study reported recently discussed the prenatal tests for rhesus incompatibility in considerably more detail.[8] The investigator, Dr. Ruth McChesney Yohe, found that the rhesus factor in five out of 35 mothers had not been correctly determined before delivery, and that these errors were particularly significant. The three infant deaths in her study occurred in this group of five untested mothers. From these findings, she concluded that the most important procedure in reducing the mortality rate in erythroblastosis is the performance of accurate rhesus tests on all pregnant women. There were no babies with erythroblastosis born to mothers whose antibody titers were negative. There was also no correlation between the level of the antibody titer and the severity of the disease in the infant.

The diagnosis of hemolytic disease of the newborn should always be suspected if jaundice develops in the first day of life.[5] In the present study, 11 of the 12 patients on whom there was reliable information developed considerable jaundice in the first 24 hours after birth. Nevertheless, the

TABLE 2

DISTRIBUTION OF 54 CHILDREN WITH ATHETOSIS BY ETIOLOGY AND YEAR OF BIRTH

Etiology		*Before 1951*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*
Jaundice	Rh.	4	1	3	4	1	2	2*
	Non-Rh.	4*	1*	0	0	1	0	2
Anoxia		11	3	1	4	2	4	3
Unknown		3	0	0	0	1	0	1
No. of Cases in Each Period		20	4	4	8	5	6	7

* Indicates one case also included in the anoxia group.

TABLE 3

THE MANAGEMENT OF RHESUS INCOMPATIBILITY FROM 1951 IN 13 INFANTS LATER DEVELOPING ATHETOSIS

Management	*No. of Cases*	*1951*	*1952*	*1953*	*1954*	*1955*	*1956*
Antenatal Blood Test							
Performed	5	1	1	2	0	0	1
Wrong interpretation	2	0	0	1	0	1	0
Not performed	4	0	1	1	0	1	1
Uncertain	2	0	1	0	1	0	0
Diagnosis							
Made	6	1	1	2	0	1	1
Not made	4	0	2	2	0	0	0
Made late*	3	0	0	0	1	1	1
Treatment of diagnosed cases:							
Simple transfusion	2	0	0	1	0	1	0
Exchange transfusion	4	1	1	1	0	0	1
Transfer to another hospital	4	0	0	0	1	2	1

* More than three days postnatal and probably sufficient to affect course of the illness.

diagnosis was not made in four babies, and was made after the third day of life in another three.

The treatment of hemolytic disease is adequate exchange transfusion, repeated if necessary, but in two of the six infants in whom the diagnosis had been made, a simple transfusion alone was used. Simple transfusion may be preferred in those patients whose diagnosis is made late and in whom the bilirubin is below 20 mg./100 ml. and is falling. This was given in two of the three babies with late diagnoses. One could, however, question the wisdom of using rhesus-positive blood as was done in one case.

If the diagnosis of iso-immunization is made antenatally, the delivery of the infant can be arranged at a suitably equipped center. It is much safer for the baby when exchange transfusion is carried out by experienced personnel,[9] and if the delivery occurs where such people are available, there is no need for the baby to be transferred to another hospital for treatment after birth. In this series, four of the six diagnosed cases were transferred, and the distances ranged from 30 to 70 miles.

There was only one case of these 13 that could be considered adequately treated on the basis of our present knowledge. The development of athetosis following hemolytic disease of the newborn is therefore due mostly to a failure to make an antenatal or neonatal diagnosis and to a misapplication of treatment, rather than to a failure of the recognized principles of management. This is now a generally accepted conclusion, and as others have pointed out, it can be used as the basis for litigation.[10]

CONCLUSIONS

Most cases of athetosis follow anoxia or severe neonatal jaundice. Prematurity is usually associated with one or both of these factors, and is seldom the single factor in the etiology. Hemolytic disease of the newborn is the commonest cause of neonatal jaundice causing athetosis. Athetosis following hemolytic disease of the newborn is still occurring in Iowa. This finding is due to a failure to apply accepted methods of treatment and agrees with Walker and Mollison, who considered the same cause responsible for about 200 unnecessary deaths *per annum* in England and Wales.[11] The errors that have been noted are (a) a lack of antenatal blood tests for rhesus typing and antibodies, (b) a failure to interpret these tests correctly and to make adequate provision for treatment prior to delivery of the baby, (c) a failure to make a diagnosis in the neonatal period, (d) the use of simple instead of exchange transfusion and (e) the use of rhesus positive blood.

Although the principles of adequate treatment of hemolytic disease have been described fully elsewhere, [9, 12, 13, 14] it is pertinent that they be summarized here:

(1) All pregnant women should have their blood groups determined early in pregnancy. If they are Rh negative, antibodies should be sought as early as possible, and again at the thirty-second to thirty-sixth week of pregnancy.

(2) All women whose blood contains antibodies should be delivered in a hospital where the staff members are familiar with hemolytic disease and

where all necessary treatment can be carried out. This care can be given only in a hospital with a "round the clock" laboratory service.

(3) All babies born of rhesus negative mothers should have the cord blood grouped, and if the infant is Rh positive, the direct Coombs' test should be performed.

(4) All attendants of newborn babies should be fully aware of the importance of early jaundice and should make regular examinations of the babies in daylight.

(5) Exchange transfusions should be performed by experienced persons, and should be repeated whenever the serum bilirubin approaches 20 mg./100 ml.

(6) Rhesus negative blood should be used.

SUMMARY

Between December, 1958, and July, 1959, a total of 54 children with athetosis were examined at the Hospital School for Severely Handicapped Children, in Iowa City, and the etiology in each case was determined. Anoxia at birth was present in 28 patients. Severe neonatal jaundice was an etiological agent in 25 children. These two factors together accounted for 49 of the 54 cases. Fourteen of the 54 babies were premature, but jaundice or anoxia was associated with the prematurity in all but two cases.

Hemolytic disease of the newborn is the commonest cause of neonatal jaundice producing athetosis. It was thought that athetosis following jaundice due to hemolytic disease of the newborn had occurred through errors of management. The proper management of these cases has been discussed, for it is possible to reduce the incidence of this severe crippling in young children.

ACKNOWLEDGEMENT

We are grateful to Dr. R. R. Rembolt for permission to study patients in his care.

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Two "Firsts" for the Iowa Heart Association

During recent months, the Iowa Heart Association has held the first of what it intends to make into two series of educational programs.

In Webster City on February 8, 15 and 22, it presented clinics for family members who are providing care for heart patients at home. At the first session, Dr. John Kersten spoke on "Physical Aspects of Cardiovascular Disease," Mary Nunn, R.N., discussed "Nursing Care at Home," and Dr. Emile O. Eckhart talked on "Understanding and Dealing With Psychosomatic or Emotional Problems of Cardiovascular Disease." All of the speakers were from Fort Dodge.

At the second session, William Beattie, RPT, of Fort Dodge, discussed "Physical Therapy Aid That Can Be Given at Home," Mr. Jack Dack, of Cherokee, talked on "Occupational Therapy for More Satisfying Living," and Miss Mary Macomber, director of the Nutrition Service of the State Department of Health, spoke on "Diet Management to Meet All Dietary Needs." At the final session, Dr. William D. deGravelles, Jr., a Des Moines physiatrist, explained "What's Available in Rehabilitation Facilities and Services," and Miss Grace Bryant, of the State Department of Social Welfare, discussed "Handling Social and Financial Problems." The total registration was over 50.

On April 4, the Heart Association began including clergymen in its educational program. At a meeting in Burlington, 30 ministers heard presentations by Dr. Forrest Coulson, a Burlington internist; Dr. Wm. Moeller, an S.U.I. psychiatrist; Mrs. Batty Thompson, the Des Moines County public health nurse; Dr. Dow Armstrong, case supervisor of the Ottumwa office of the Division of Vocational Rehabilitation; and Mr. Robert Smith, of the State Social Welfare Department.

There was lively discussion, into which all members of the group entered, and thus it was apparent that they found the program interesting.

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 29-YEAR-OLD WHITE laborer was admitted to University Hospitals because of a lesion on his palate. Three months before admission he had developed a sore throat. Two months before admission he had noticed considerable difficulty swallowing solid foods and mild difficulty swallowing liquids. His trouble with swallowing had become progressively worse. Two months before admission he had noticed a nasal quality in his speech, had developed anorexia, and had begun to lose weight. Two days before admission he had developed nausea, dull aching and abdominal discomfort, not localized in any one spot. At that time he was admitted to a hospital in Des Moines, where a lesion was seen on the palate. He had been well in the past, except for virus pneumonia in 1953.

Physical examination disclosed evidence of marked weight loss. Speech and movements were slow. The blood pressure was 140/80 mm. Hg, the pulse rate was 100 per minute and the respiratory rate was 16 per minute. The nasal septum was in the midline, and the nasal mucosa appeared normal. There were no polyps, tumors or abnormalities of the turbinates. Posterior rhinoscopic examination revealed a necrotic granulating lesion involving the whole of the soft palate and the left side of the nasopharynx and hypopharynx. Part of the uvula and a portion of the posterior soft palate were necrotic. The left nasal sinus transilluminated poorly, but the right was normal. The lingual tonsils, pyriform sinuses, arytenoids, and false and true cords were normal. The right and left external auditory canals and tympanic membranes appeared normal. The heart and lungs were normal. The abdomen was rounded, soft and slightly tender. The bowel sounds were normal. The intra-abdominal organs were not palpable. The extremities were normal.

The urinalysis was normal, the hemoglobin was 11.6 Gm./100 ml., and the red blood cell count was 3,790,000/cu. mm. The white blood cell count was 7,300/cu. mm., and the differential count showed 83 segmented polymorphonuclear leukocytes, 2 band polymorphonuclear leukocytes, 10 lymphocytes and 5 monocytes. The sedimentation rate was 16 mm. in one hour. The platelet count was 144,000/cu. mm. The prothrombin time was 16.2 seconds, with a control of 15.6 seconds. The BUN was 17 mg./100 ml., and the fasting blood sugar was 83 mg./100 ml. Intradermal tests for tuberculosis, histoplasmosis, blastomycosis and coccidiomycosis were negative. Agglutinations for brucellosis were present in a titer of 1:20. (This is considered a negative result.) No agglutinations for tularemia were present.

X-ray films of the chest and hands were normal. Anteroposterior x-ray films of the abdomen taken in the supine and upright positions revealed a tremendous amount of fecal material scattered throughout the colon and a small amount of dilated small bowel. The findings were suggestive of early ileus or partial small-bowel obstruction. An upper gastrointestinal series and motor meal done one week after admission disclosed a normal stomach, normal duodenal bulb and normal small bowel. The bone marrow was normal. A biopsy of the necrotic mass of the soft palate showed thromboangiitis and thrombophlebitis, with phlegmenous inflammation and necrosis of tissues of the soft palate and pharynx. There was no evidence of malignancy. Smears and cultures taken from the necrotic mass in the palate were negative for acid-fast organisms, and on culture tubercle bacilli did not grow out. Routine cultures of this necrotic lesion showed normal flora.

The patient had fever to 102°F. or 103°F. almost every day during his one-month hospitalization. During the first few days in the hospital, he was thought to have intestinal obstruction. Wangensteen's suction was instituted and continued for two days. Thereafter, the abdominal complaints disappeared and did not return. On the fifth hospital day, he was started on penicillin, 800,000 units every 12 hours. On the seventh hospital day. Albamycin, 250 mg. every 6 hrs. was started. On the twelfth hospital day, the dosage of penicillin was reduced to 800,000 units daily. The lesion of the palate was not improved by antibiotic therapy, and the patient's general condition was somewhat worse than on admission. On the thirteenth day, Aristocort, 10 mg. every 6 hrs., was started.

On the twenty-second day, a left myringotomy was done because the patient had developed an earache. Amber serous fluid was found. Culture of this fluid revealed hemolytic Staphylococcus aureus. On the twenty-fifth hospital day, the patient's face and neck were quite swollen. This was thought to be secondary to the large doses of steroids. Tracheostomy was considered, but not done, for there was no evidence of obstruction of the respiratory passages. On the twenty-eighth day of hospitalization, the patient suddenly developed severe respiratory distress at 8:48 p.m. A trache-

ostomy was done at 8:50 p.m. The patient died at 8:55 p.m.

SUMMARY OF CLINICAL DISCUSSION

Dr. J. A. Buckwalter, Surgery: I shall discuss today's case as two separate problems. The first, relating to the primary diagnosis, is the more interesting. The second is the cause of the patient's death. The pertinent historical points are a sore throat for three months, swallowing difficulty, the development of a nasal quality of voice, anorexia and weight loss in a 29-year-old, apparently healthy laborer. Perhaps it might be important to know more about his occupation and social history.

As the first "red herring" in this protocol, I suggest the history of virus pneumonia. I can see no relationship between this occurrence and the primary diagnosis of his final illness, or between it and his hospital course and his death.

The physical findings at the time of his admission were not exciting. The most important of them was the midline lesion in the roof of his mouth. The remainder of the examination of the mouth, nasal cavity and pharynx was unremarkable. The patient was wasted and seriously ill, but there were no other helpful physical findings.

The extensive laboratory examinations are of chief interest because of their negative results. An exception was the x-ray examination, which revealed findings consistent with ileus or partial mechanical obstruction, but I am not excited by this finding, since the clinical signs of obstruction later disappeared. Note that an upper gastrointestinal barium study was done. Obviously, the physicians who took care of this patient had abandoned the idea of mechanical obstruction of the bowel as a second "red herring."

Of particular interest are the negative studies for tuberculosis and mycotic infections. However, the patient didn't live long enough for these studies to be conclusive. Fungus cultures may be positive in a week, but frequently become so only after a month or longer. TBC cultures and guinea pig studies require more than a month. I assume that the absence of a serology report was an oversight, and that it was negative.

Of primary interest in this case was the biopsy. The histologic findings revealed a non-specific chronic inflammatory process with a vasculitis involving both arteries and veins. Of particular importance was the absence of any indication of a granulomatous process.

Addressing myself to the interesting problem of differential diagnosis in this case, I have a distinct advantage over the clinicians who cared for this man in that I know the disorder was finally fatal. It is not clear at this time whether or not this compensates for the advantage related to selection of data. In approaching the problem of differential diagnosis in any patient, particularly in a patient with an obscure or uncommon disorder, it is useful to consider large categories of disease processes, and to note how they fit with the historical information, physical findings and laboratory information. The most obvious diagnosis in this case was a neoplasm, malignant in character. The possibilities include:

Carcinoma (epidermoid, transitional)
Lympho-epithelioma
Lymphosarcoma
Salivary (mixed, etc.)
Others (chordoma, melanoma, teratoma, craniopharyngioma, osteogenic and rhabdosarcoma, leukemic infiltrate, metastases)

The first and second of these possibilities are the most probable. A review of the literature indicates that there is a difference of opinion concerning the relative incidences of the listed neoplasms that occur in the oral and nasal cavities. Perhaps this confusion is related to the anaplastic character of many of these lesions. Lympho-epithelioma, or epithelioma with a predominant lymphoid element, is reported to make up between 10 and 50 per cent of the malignant nasopharyngeal lesions. The other lesions indicated are remote, unlikely possibilities in this case. It is of interest that mixed tumors originating in salivary tissue may occur here or anywhere else about the head and neck.

The biopsy did not exclude neoplasm in this case. It is quite possible that a non-representative sample was obtained from the edge of the neoplasm, where there was only necrosis and chronic inflammation.

Of the types of infection listed below, I consider the first four to be most plausible in this case:

Metastatic pyogenic infection (staph, etc.)
Mycoses (coccidiomycosis, blastomycosis, actinomycosis, etc.)
Syphilis
Tuberculosis
Diphtheria
Others (Boeck's, brucellosis, yaws, leprosy, anthrax, histoplasmosis)

Perhaps least likely of the first four is a metastasis from an acute pyogenic process elsewhere in the body, producing an abscess in the roof of the mouth and resulting in osteomyelitis, etc. There is no history to support this possibility.

This could be a gumma of syphilis. Again, I'd like to have that serology report.

In view of the laboratory findings which have been discussed, a mycotic lesion or tuberculosis is unlikely. Neither possibility is finally excluded, but no support for any of these diagnoses is provided by the biopsy.

The only congenital lesion which should be considered at all is Thornwald disease. This rare disorder is associated with a cystic remnant of primitive notochord attached to the pharyngeal mucous membrane, usually posteriorly placed, and so al-

most excluded in our patient. Beryllium, lead or other exogenous agents could conceivably have been the initiating factor causing tissue necrosis, with secondary infection.

The fifth category that I wish to consider may be referred to as allergic or immunologic. The possibilities of this sort are as follows:

Lethal midline granuloma (non-specific—i.e., specific agent absent or *missed*)

"Arthus" hyperimmune antigen response?

Polyarteritis nodosa relationship?

Wegener's granulomatosis?

Cortisone response.

I believe that this patient had a lethal midline granuloma. This rare lesion occurs in the midline, in the face, in the lip or in the palate as in this patient. Its course has been described as resembling the one followed by the man whom we are discussing, although usually it is of longer duration. No specific etiology has been identified. The concept most attractive to me, though many other equally unsupported hypotheses have been advanced, is that this lesion is an example of the "Arthus" type hyperimmune phenomenon. Isoimmunization could occur with recurring upper respiratory infection. An unknown "trigger" mechanism then could precipitate the final destructive process which advances with tissue necrosis, then acute and chronic secondary infection, and then death. A relationship to polyarteritis nodosa probably fits with this concept.

Wegener's granulomatosis is a weird disorder characterized by similar lesions in the upper respiratory tract, always associated with renal insufficiency, uremia and death. In this discussion, and any dealing with midline lethal granuloma, we are concerned almost exclusively with speculation rather than with fact. It is quite possible, as new and more refined diagnostic technics are developed, that all of the so-called lethal midline granulomas will be proved to have a specific cause. At present, however, we may think of this as a "wastebasket" diagnosis into which are thrown all lesions that behave as this one did, and for which no specific etiologic agent has been identified. As they did in this case, clinicians must continue to search for specific causative agents.

Now I shall address myself to the second problem, the reason for the patient's downward course and demise. At the time of his admission, his temperature was reported as hovering between 102° and 103°F., a level that is compatible with the chronic inflammatory process that was going on in the roof of his mouth. On the fifth day after his admission, penicillin was started, apparently for the purpose of controlling the secondary infection of the oral lesion. It is rather surprising that penicillin therapy had not been started earlier, or that a wide-spectrum antibiotic wasn't used. Albamycin was started on the seventh day, presumably because a hemolytic Staphylococcus aureus infection was suspected, even though the cultures had been negative. Perhaps the antibiotic was given prophylactically.

On the thirteenth hospital day, massive doses of Aristocort were started. The usual dose of this steroid is 4 mg., t.i.d. Dramatic remissions of midline granulomas have been reported in patients treated with adrenocortical steroids, but in this case there is no evidence that remission occurred. I suggest that instead, by helping to spread the infection, steroid therapy may have expedited the patient's demise.

By the twenty-second day after his admission, nine days after the start of steroid therapy, there was an obvious pyogenic inflammatory process, as indicated by the culture of hemolytic Staphylococcus aureus from the middle ear. The swelling of the patient's face and neck occurred much too soon after the start of steroid therapy to have been caused by it.

At this juncture, it would be nice to have a detailed description of the physical findings. I suggest that by this time there was a phlegmonous inflammatory process present in this man's head and neck. It is possible that finally a retropharyngeal abscess formed. Tracheostomy was considered, but was not performed on the twenty-fifth day.

The abrupt termination of the patient's life on the twenty-eighth day suggests a final catastrophic event. If the protocol is accurate, it is unlikely that pharyngeal edema secondary to the inflammatory process was the final cause of death. Slowly progressive respiratory difficulty could have been expected in that event, and it would have forewarned the clinician so that a perhaps lifesaving tracheostomy could be done. Assuming that death did occur abruptly as described, I suggest that erosion of an abscess into the tracheobronchial tree, with suffocation, may have caused death. If a major artery had been eroded, there should have been some indication in the form of bleeding. Physical findings limited chiefly to the neck, and the final episode, do not support a diagnosis of either cavernous or lateral sinus thrombosis. Medullary depression, with respiratory arrest secondary to the inflammatory process in the neck, could also be expected to cause a more slowly progressing final issue.

In concluding, I believe that this case is an almost classic example of a midline lethal granuloma which progressed more rapidly than is usual, that death was expedited by thyroid therapy and an overwhelming hemolytic Staphylococcus aureus infection in the head and neck, and that the final episode most probably related to suffocation secondary to erosion, and to the emptying of a retro- or parapharyngeal abscess into the tracheobronchial tree.

Dr. George N. Bedell, Internal Medicine: This case is so difficult that two groups of students have

been assigned to report on it. Mr. Bond will speak for one of them.

Mr. Lowell Bond, Junior Medical Student: Generally speaking, we considered the same things that Dr. Buckwalter did, as regards possible inflammations and neoplasms. We thought that both these areas were pretty much excluded by the protocol, and thus we resorted to more esoteric types of diagnoses that we have seen only in pathology books. These possibilities were Wegener's granulomatosis and malignant granuloma. At first we thought they might be identical things, but following investigation we saw that they were not, and consequently our diagnosis would be malignant granuloma or the midline granuloma. Our thoughts on the immediate cause of death were that it was secondary to the great inflammatory process going on in the neck region.

Mr. Lowell Harris, Junior Medical Student: Our group thought very much as Mr. Bond's did. We used pathology texts because we hadn't come across anything of the sort in lectures and surely not in experience. We went back to last week's otolaryngology lecture and dug up something called "noma," which some books claim to be an idiopathic gangrene of the pharynx and oropharynx, but others say is due to a mixed bacterial infection of various pathogenic and syphilitic organisms found in the mouth. To us, this seemed one of the most logical possibilities.

We also came across the granuloma "buttress," which we didn't understand. We decided on the basis of the biopsy report that a diagnosis ruling out malignancy wasn't sufficient, for a failure to see malignant cells on just a single occasion doesn't constitute positive proof of their absence.

We also wondered why a VDRL was not done, for one of the first things to rule out in a case like this would be a syphilitic gumma.

We also wondered why the patient had been given steroids. It occurred to all of us that if the staphylococcal infection had been overwhelming—and the culture of his ear did show it to be present—it is very possible that the steroids would mask the septicemia leading to his demise.

Dr. Bedell: The serology wasn't intentionally withheld. The failure to report it is what happens when one knows what the answer is before he writes up the protocol. A serology was done, and it was negative.

The otolaryngology diagnosis was lethal midline granuloma. The patient was seen by members of the staff in internal medicine, and it was their impression that this man had a serious generalized disease of unknown etiology. I gather from the clinical record that death was sudden. There was a paucity of progress notes for a while, and then on the last day of the patient's life, progress notes were made at two to five minute intervals.

Dr. F. P. Aleu, Pathology: Dr. Buckwalter and the first group of students gave the correct diagnosis.

The final pathologic diagnosis was therefore lethal midline granuloma. The palate and nasopharynx were extensively destroyed by this ulcernecrotic process which resulted in a severe laryngeal edema. This accounted for the respiratory distress that ended in death. No pharyngeal abscesses were found, and there was no evidence of any recent hemorrhage to account for the fatal outcome. The gastrointestinal tract was free from any significant anatomical abnormality. Other autopsy findings included a mild pulmonary edema and a calcified granuloma in the right middle pulmonary lobe.

There are several terms to describe this lesion (all merely descriptive). The most widely used in current American literature is perhaps *lethal midline granuloma.* In Britain it is simply *malignant granuloma,* and in the Latin countries, of course, it is *granuloma gangrenescens.* The old favorite expressions *idopathic, essential* and *cryptogenetic,* to everyone's surprise, are not used in this connection, in spite of the darkness that involves the etiology of this process.

Dr. Lierle, almost 18 years ago, published an article dealing with what he called "chronic infectious granuloma of the nose." He has seen several cases of it since then, and will present a motion picture illustrating the clinical appearance of the lesion. It would thus be superfluous for me to take your time in describing it, for you will see it. I should like to say, however, that the edges of the ulcer are hard—an aspect that the picture will not show.

Usually patients with lethal midline granuloma die of malnutrition, hemorrhage or secondary infection. Laryngeal edema as a cause of death is rare.

The etiology of this process is rather obscure—almost black. There are several hypotheses, most of which have been mentioned today.

Perhaps I should add the possibility of bacterial synergism. It is well known that sometimes two or three organisms, through a cooperative effort, accomplish things that they could not achieve individually. Postmortem cultures of the necrotic area in this case yielded alpha hemolytic streptococcus, Aerobacter aerogenes and Candida albicans. I am not familiar with any ecologic relations among these organisms, but the possibility is one that we should keep in mind.

The hypothesis of tissue hypersensitivity of the Schwartzman variety seems also a highly reasonable one.

It must be emphasized that a neoplasm (reticulum cell sarcoma, lympho-epithelioma, etc.) may produce similar clinical findings, and every effort should be made to exclude this possibility before making the diagnosis of lethal midline granuloma. Histologically, no specific changes were present.

There were large areas of necrosis, alternating with others in which a dense cellular infiltration could be seen. This was made up of polymorphonuclear leukocytes, a few plasma cells and occasionally some eosinophils. These constitute only a minimal fibroblastic reaction. No multinucleated giant cells were seen, and scattered throughout there were numerous clumps of bacteria. Acid-fast, Grocott and Gram stains were negative.

Before finishing, I should like to show you another slide that illustrates the severity of the laryngeal edema.

Dr. Bedell: The cause of death then, was laryngeal edema. There was no evidence of a generalized septicemia as some of us postulated?

Dr. Aleu: No.

Dr. R. F. Sheets, Internal Medicine: One other disease that I should like to mention was first described by Takahara, I think, about 1951.* It is characterized by a lesion such as this patient had, in which there is necrosis and gangrene of the tissues of the mouth. In Takahara's disease, there is a lack of catalase in the blood. This can be detected quite easily by adding 3 per cent hydrogen peroxide to a 5 ml. sample of the patient's blood which is anticoagulated. If there is a lack of catalase, the blood turns black with the addition of two or three drops of hydrogen peroxide. If there is a normal amount of catalase, 30 or more drops of hydrogen peroxide will be necessary to produce this change. I don't know that any particular difference in the pathologic picture has been described; the differentiation must be by chemical means.

Dr. Bedell: Although lethal midline granuloma may be a new acquaintance for most of us, it is an old friend to Dr. Lierle. He has seen several patients with this disease, and he has kindly consented to show us a movie of one of these individuals and to tell us some of his experiences with this problem.

Dr. Dean M. Lierle, Otolaryngology: I wish to present a case of so-called infectious granuloma, or progressive lethal granulomatous ulceration of the nose.

A married woman aged 22 had the onset of her illness in 1935, when she noticed a slight ulceration in the floor of the left side of the nose, in the vestibule. There was some nasal discharge, and she complained of pain in the left cheek and the upper teeth on the same side. The ulcer was about 1.5 cm. in diameter and not particularly deep, but was covered with a thick crust and was very painful. At times she had low-grade fever, excessive lacrimation and headaches. In December, 1936, when she was seen in the otolaryngology outpatient clinic, the lesion was about the same except that it had become a little larger and deeper. Her past medical, family and social histories were essentially without significance. The only treatment she had received was an injection of some type administered by her family physician.

Physical examination revealed essentially a normal condition. Roentgenograms of the sinuses and of the teeth revealed nothing pathologic. No clinical evidence of sinus disease was present. There was no evidence of blood dyscrasia, her blood count being normal in every respect. Other laboratory tests, including urinalysis, the Wassermann and provocative Wassermann tests, and determinations of the blood sugar gave normal results. The report of biopsy was chronic infectious granuloma. Smears were negative for Vincent's organism and fungi. Cultures were reported to be positive for hemolytic Staphylococcus aureus and the beta hemolytic streptococcus.

The lesion was treated locally with boric acid compresses, and later with 2 per cent yellow mercuric oxide ointment, and it healed within about three weeks. Between January, 1937, and September, 1941, the patient was seen in the outpatient clinic on three different occasions with recurrences of the ulcer, and each time the lesion responded to the simple treatment just described.

In September, 1941, she again returned, and reported that her nose had been all right until May of that year, when it had received a mild blow. It became swollen, tender and bluish, and an abscess developed and drained into the nasal cavity. Examination revealed a greatly disfigured nose, with extensive ulceration of the nasal tip and floor on the left side. There was a profuse purulent discharge, and crusting and bleeding with the slightest manipulation. She was admitted to the hospital, and the disease slowly progressed until there was extensive involvement of the soft tissues of the entire face, and considerable exposure and destruction of the bones of the face. Secondary anemia existed, due to frequent small hemorrhages. There was intense pain. The white cell count varied between 9,000 and 14,000, and the differential count remained normal. At no time was there any evidence of adenopathy. The patient rapidly lost weight because of her inability to eat. She had a septic type of temperature, and was severely toxic. A fatal termination was inevitable within a short time.

During the final hospitalization, the following procedures had been carried out:

1. Repeated general examination by members of the section on internal medicine, with findings of no signficance other than those which one would expect with any infection

2. Repeated biopsies, with the same pathologic diagnosis—chronic infectious granuloma

3. Tissue cultures, smears and animal inoculations (Staph. aureus, alpha hemolytic streptococcus, Proteus vulgaris and a diphtheroid organism were reported. Guinea pig inoculations for tuberculosis gave negative results. On one occasion, an

* Takahara, S.: Progressive oral gangrene probably due to lack of catalase in blood (acatalasaemia); report of 9 cases. LANCET, 2:1101-1104, (Dec.) 1952.

anaeobic streptococcus was found. Various other tests, such as determination of the blood sugar, gave normal results)

4. Cutaneous tests for sporotrichosis, with negative results

5. Agglutination tests for typhoid, paratyphoid, tularemia, etc., with negative results

6. Wassermann and provocative Wassermann tests, with negative results

7. Frei tests for lymphogranuloma venereum, with negative reaction with the human antigen

8. The Straus test for glanders, with negative results.

The following treatment was carried out, most of it in desperation, during the patient's final stay in the hospital:

1. Local applications of boric acid dressings, and various onitments and dye antiseptics

2. Administration of sulfanilamide, sulfathiazole [2-(paraaminobenzenesulfonamido)-thiazole] and sulfadiazine [2-(paraaminobenzenesulfonamido)-pyrimidine]

3. Roentgen irradiation (400 r)

4. Administration of mapharsen

5. Routine antisyphilitic therapy (Department of Syphilology)

6. Fever therapy

7. Repeated transfusions, intravenous injections and other supportive measures

8. High vitamin therapy.

The laboratory on one occasion reported the presence of an anaerobic streptococcus, and zinc peroxide was used. At first there was decided improvement, but later the disease progressed in spite of treatment.

My use of zinc peroxide was based on the success Meleney had had with it in cases of chronic necrotizing ulcers seen in general surgical practice. He has shown that the beta hemolytic streptococcus which is present in these lesions is a facultative anaerobe, or as he calls it, the microaerophilic hemolytic streptococcus. This, combined with hemolytic Staphylococcus aureus, may cause ulcerative lesions. He has been able to reproduce in animals some lesions similar to those found in human beings.

Several months after this patient's last admission, although her disease was far advanced, radical surgery was contemplated, but though the patient was willing, there were other objections and the procedure was not carred out.

Dr. Bedell: This is a fatal disease, its cause is unknown and apparently there is no specific treatment for it.

ANATOMICAL DIAGNOSES

1. Inflammation and necrosis of
 a. hard palate
 b. soft palate
 c. post-pharyngeal wall
 d. post-nasopharynx
 consistent with "lethal midline granuloma"
2. Acute edema of larynx and epiglottis
3. Acute pulmonary edema
4. Calcified granuloma, right middle pulmonary lobe
5. Passive congestion, liver and spleen.

Coming Meetings

In State

May 5	**Iowa-Nebraska Medical Assembly.** Chieftain Hotel, Council Bluffs
May 11-13	**Rare Earths in Biochemical and Medical Research.** Iowa State University, Ames

Out of State

May 1-2	**American Society for Clinical Investigation.** Haddon Hall, Atlantic City
May 1-4	**Medical Association of Georgia.** Columbus
May 1-4	**Oklahoma State Medical Association.** Oklahoma City
May 1-5	**Society of American Bacteriologists.** Bellevue-Stratford Hotel, Philadephia
May 2	**American Federation for Clinical Research.** Chalfonte-Haddon Hall, Atlantic City
May 2-4	**Louisiana State Medical Society.** Capitol House, Baton Rouge
May 2-5	**Kansas Medical Society.** Baker Hotel, Hutchinson
May 2-6	**Intermediate Electrocardiography for General Physicians and Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
May 2-6	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
May 2-11	**Pan American Medical Association Congress.** National Auditorium, Mexico City, Mexico
May 2-13	**General Surgery.** Cook County Graduate School of Medicine, Chicago
May 2-13	**Internal Medicine.** Cook County Graduate School of Medicine. Chicago
May 3	**Anesthesiology.** University of Nebraska College of Medicine, Omaha
May 3-4	**Association of American Physicians.** Haddon Hall, Atlantic City
May 3-5	**Society of Pediatric Research.** New Ocean House, Swampscott, Mass.
May 3-5	**State Medical Society of Wisconsin.** Hotel Schroeder, Milwaukee
May 4	**Symposium on Cardiovascular Disease** (University of California, San Francisco). Santa Rosa
May 4	**Los Angeles County Heart Association Annual Meeting.** Biltmore Bowl, Los Angeles
May 4	**Second Annual Scientific Symposium, Memorial Hospital of Long Beach.** Long Beach
May 4	**Trauma Day.** University of Nebraska College of Medicine, Omaha

May 4-7	**Arizona Medical Association, Inc.** Safari Hotel, Scottsdale, Ariz.
May 5-6	**A Course on Urology.** University of California, San Francisco
May 5-6	**American Pediatric Society.** New Ocean House, Swampscott, Mass.
May 5-7	**Pacific Northwest Society of Pathologists.** Vancouver, B.C.
May 5-7	**Valley Children's Hospital Spring Clinics.** Roosevelt High School Auditorium, Fresno
May 5-8	**Student American Medical Association.** Statler-Hilton Hotel, Los Angeles
May 6-7	**Outlook for the Adult Retarded (The Woods Schools, Langhorne, Pa., and the Massachusetts Special Commission on Retarded Children).** Massachusetts Mental Health Center Auditorium, Boston
May 6-7	**Management of Medical Emergencies.** University of California, Los Angeles
May 6-8	**International Congress of Phlebology.** Theatre Municipal de Chambery, Savoy, France
May 6-9	**American Psychoanalytic Association.** Chalfonte-Haddon Hall, Atlantic City
May 7	**Tacoma Surgical Club.** Tacoma
May 7-11	**North Carolina Medical Society.** Hotel Sir Walter Raleigh, Raleigh
May 7-13	**Medical Society of the State of New York.** Hotel Statler Hilton, New York City
May 9-11	**Aerospace Medical Association.** Americana Hotel. Bal Harbour, Florida
May 9-11	**Cardiovascular Diseases for General Physicians and Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
May 9-13	**American Psychiatric Association, Inc.** Hotel Traymore, Atlantic City
May 9-13	**Blood Vessel Surgery.** Cook County Graduate School of Medicine, Chicago
May 9-13	**Early Detection and Prevention of Disease (The American College of Physicians).** Phipps Institute Health Center, Philadelphia
May 9-14	**Hematology.** New York University Post-Graduate School, New York City
May 10-12	**Mississippi State Medical Association.** Hotel Heidelberg, Jackson
May 10-13	**New Mexico Medical Society.** Western Skies Hotel, Albuquerque
May 11-13	**American Association of Genito-Urinary Surgeons.** Dearborn Inn, Dearborn, Michigan
May 11-13	**American Association for Thoracic Surgery.** Deauville Hotel, Miami Beach
May 12-13	**Alcohol Intoxication and Influence (Western Reserve University Law-Medicine Center).** Cleveland
May 12-14	**American Association for Cleft Palate Rehabilitation.** Brown Palace Hotel, Denver
May 12-14	**Ear-Nose-Throat.** University of California, San Francisco
May 12-14	**Nevada Academy of General Practice, 1960 Annual Assembly.** Riverside Hotel, Reno
May 12-15	**Hawaii Medical Association.** Honolulu
May 13-14	**Portland Surgical Society.** Portland
May 14-17	**South Dakota State Medical Association.** Alonzo Ward Hotel, Aberdeen
May 14-18	**Medical Society of New Jerscy.** Chalfonte-Haddon Hall, Atlantic City
May 15-18	**American Society of Maxillofacial Surgeons.** Ambassador Hotel, Los Angeles
May 15-18	**International College of Surgeons, International Congress.** Rome, Italy
May 16-18	**American Ophthalmological Society.** The Broadmoor, Colorado Springs
May 16-18	**Office Psychiatry for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
May 16-19	**American Urological Association, Inc.** The Palmer House, Chicago
May 16-19	**Annual Meeting National Tuberculosis Association-American Trudeau Society.** Statler-Hilton and Biltmore Hotels, Los Angeles
May 16-20	**Current Research in Cardiovascular Disease (American College of Physicians).** Clinical Center Auditorium, National Heart Institute, Bethesda, Maryland
May 16-20	**Medical Library Association, Inc.** Muehlebach Hotel, Kansas City
May 16-21	**American Association of Mental Deficiency.** Lord Baltimore Hotel, Baltimore
May 16-27	**Basic Electrocardiography.** Cook County Graduate School of Medicine, Chicago
May 16-27	**Board of Surgery Review, Part II.** Cook County Graduate School of Medicine, Chicago
May 16-27	**Obstetrics, General and Surgical.** Cook County Graduate School of Medicine, Chicago
May 16-27	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
May 17-19	**Massachusetts Medical Society.** Statler-Hilton Hotel, Boston
May 17-19	**Ohio State Medical Association.** Sheraton Cleveland Hotel, Cleveland
May 17-19	**South Carolina Medical Association.** Ocean Forest Hotel, Myrtle Beach
May 17-20	**American Association of Plastic Surgeons.** Milwaukee Inn, Milwaukee
May 18-20	**Course on Keratoplasty for Specialists in Ophthalmology.** San Francisco-Stanford Hospital, San Francisco
May 18-20	**Ogden Surgical Society.** Ogden, Utah
May 19-20	**Proctology.** University of California, San Francisco
May 20-22	**1960 Annual Convention American College of Nutrition.** Huntington-Sheraton Hotel, Pasadena
May 20-22	**Annual Meeting and Scientific Session, California Heart Association.** Claremont Hotel, Berkeley
May 21	**Long Beach Surgical Society Annual "Clinic Day."** Lafayette Hotel, Long Beach
May 23-25	**Minnesota State Medical Association.** Kahler Hotel, Rochester
May 23-26	**Surgery.** University of Kansas School of Medicine, Kansas City
May 23-26	**The Hypertensive Diseases: Diagnostic and Therapeutic Procedures in Essential, Adrenal and Renal Hypertension (The American College of Physicians).** Evans Amphitheater, Boston
May 23-27	**Breast and Thyroid Surgery.** Cook County Graduate School of Medicine, Chicago
May 23-27	**Diseases of the Chest.** Cook County Graduate School of Medicine, Chicago
May 23-27	**General Surgery.** Cook County Graduate School of Medicine, Chicago
May 23-27	**Proctology for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
May 23-28	**Asian-Pacific Congress of Cardiology.** Melbourne, Australia
May 24-27	**Illinois State Medical Society.** Hotel Sherman, Chicago
May 30-June 1	**American Gynecological Society.** Williamsburg Inn, Williamsburg, Va.

May 30-June 2	**American Orthopaedic Association.** The Homestead, Hot Springs, Va.
May 30-June 3	**Pediatric Advances (Children's Hospital of Philadelphia and Graduate School of Medicine, University of Pennsylvania).** The Children's Hospital, Philadelphia
June 1-3	**Physical Medicine and Rehabilitation in Neuromuscular and Medical Conditions.** University of Colorado Medical Center, Denver
June 2-3	**Respiro-cardiac Resuscitation (The American College of Cardiology).** New York City
June 2-4	**Advances in Surgical Anatomy, Normal Anatomy and Histology of the Eye.** University of California, San Francisco
June 2-7	**Seventh Congress, Pan American Medical Women's Alliance.** San Juan, Puerto Rico
June 3	**Surgical Anatomy: Head and Neck.** University of California at Los Angeles
June 4-5	**Medico-legal Aspects of Injuries of Head, Face and Neck.** Biltmore Hotel, Los Angeles
June 4-5	**Surgical Anatomy: Thorax, Abdomen and Pilvis.** University of California at Los Angeles
June 5	**Symposium on Clinical Medicine and Surgery (San Diego County Medical Society and the Medical Department, 11th Naval District).** El Cortez Hotel, San Diego
June 5-8	**Ophthalomology.** University of Colorado Medical Center, Denver
June 6	**Surgical Anatomy: Extremities.** University of California at Los Angeles
June 6-10	**Practical Pediatric Hematology.** Children's Hospital, Philadelphia
June 9-11	**A Course on the Foot.** University of California, San Francisco
June 6-17	**Surgical Technic.** Cook County Graduate School, Chicago
June 6-18	**Histochemistry.** Univ. of Kansas Medical Center, Kansas City
June 6-24	**Forty-Fifth Session, Trudeau School of Tuberculosis and Other Pulmonary Diseases.** Saranac Lake, New York
June 8-10	**Canadian Federation of Biological Societies (Canadian Physiological Society, Pharmacological Society of Canada, Canadian Association of Anatomists, Canadian Biochemical Society).** University of Manitoba, Winnipeg
June 8-12	**American College of Chest Physicians.** Miami Beach
June 9-10	**American Geriatrics Society.** Americana Hotel, Miami Beach
June 9-11	**Endocrine Society.** Eden Roc Hotel, Miami Beach
June 9-12	**American Medical Women's Association.** Shore Club, Miami Beach
June 9-12	**American Therapeutic Society.** Barcelona Hotel, Miami Beach
June 10-12	**American College of Angiology.** Roney Plaza Hotel, Miami Beach
June 10-12	**American Electroencephalographic Society.** Belmont Hotel, Cape Cod, Massachusetts
June 10-12	**Society of Biological Psychiatry.** Hotel Deauville, Miami Beach
June 11	**American Academy of Tuberculosis Physicians.** Miami Beach
June 11	**International Cardiovascular Society, North American Chapter.** di Lido Hotel, Miami Beach
June 11-12	**American Diabetes Association, Inc.** Hotel Deauville, Miami Beach
June 11-12	**Postgraduate Seminar in Arthritis and Related Diseases.** Diplomat Hotel, Hollywood-by-the-Sea, Florida
June 11-16	**American Society of X-Ray Technicians.** Netherland Hilton Hotel, Cincinnati
June 12	**Society for Vascular Surgery.** di Lido Hotel, Miami Beach
June 13-14	**Emotional and Social Aspects of Child Health in Pediatric Practice.** Stanford University School of Medicine, San Francisco
June 12-17	**Association for Research in Ophthalmology, Inc.** Miami
June 12-18	**Ob-Gyn Traineeship.** University of Nebraska College of Medicine, Omaha
June 13-15	**American Neurological Association.** Hotel Statler, Boston
June 13-15	**Society for Investigative Dermatology, Inc.** di Lido Hotel, Miami Beach
June 13-15	**Gynecology for Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
June 13-17	**Annual Meeting, American Medical Association.** Miami Beach
June 13-17	**Canadian Medical Association.** Banff, Alberta
June 13-17	**International Congress of Clinical Pathology.** Madrid, Spain
June 13-17	**International Congress of Physio-Pathology of Animal Reproduction and Artificial Insemination.** Amsterdam, Netherlands
June 15-18	**Idaho State Medical Association.** Sun Valley
June 17-19	**Conference on Research in Emphysema (University of Colorado Medical Center).** Aspen, Colorado
June 19-21	**Maine Medical Association.** Hotel Samoset, Rockland, Maine
June 20-22	**Gallbladder Surgery.** Cook County Graduate School of Medicine. Chicago
June 20-24	**Internal Medicine (American College of Physicians).** Indiana University School of Medicine, Indianapolis
June 20-24	**Advanced Electrocardiography.** Cook County Graduate School of Medicine, Chicago
June 20-24	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
June 20-25	**Seventh Institute on Science in Law Enforcement (Western Reserve University Law-Medicine Center and the Coroner's Office, Cuyahoga County).** Cleveland
June 20-25	**Clinical Hematology.** University of Colorado Medical Center, Denver
June 20-July 1	**Gynecology, Office and Operative.** Cook County Graduate School of Medicine, Chicago
June 22-24	**A Course in Industrial Medicine.** University of California, San Francisco
June 22-25	**Society of Nuclear Medicine.** Estes Park, Colorado
June 23-25	**Surgery of Hernia.** Cook County Graduate School of Medicine, Chicago
June 26-July 2	**American Physical Therapy Association.** Penn-Sheraton Hotel, Pittsburgh
June 27-29	**Obstetrics and Gynecology.** University of Colorado Medical Center, Denver

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AMERICAN MEDICAL ASSOCIATION

Miami Beach, June 13-17, 1960

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1. Innerfield, I.: Clinical report cited with permission
2. Clinical report cited with permission

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in a week after
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PROGRESSIVE PATIENT CARE

The March issue of the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY contains some editorials describing a scheme of hospital organization that deserves careful scrutiny.* The technic, it seems, had previously been described in two other articles, "Progressive Hospital Care—What It Means to You" in the December 21, 1959, issue of MEDICAL ECONOMICS, and "The Patient Gets a Break," in the January 2, 1960, issue of the SATURDAY EVENING POST, but we had failed to notice them, and perhaps many of our readers missed them, too.

The vast majority of hospitals, the Michigan editors point out, have offered full nursing care to all patients for as long as they stayed in the hospital. In recent years, when an insufficient number of nurses could be secured, nurses' aides have been used, to varying extents, to take up the slack.

Desperately ill patients have been provided special nurses—from one to three of them to serve each such patient 24 hours a day. Such an arrangement is fantastically expensive, and falls short of achieving its objective in that on occasion the special nurse has to leave her patient while she chases down the hall for a syringe, a hypodermic needle, an ampule of something for shock, a medication for pain, or something else.

On the other hand, hospitals have been providing their ambulatory patients with more nursing care than they really need.

In January, 1952, the administrator at St. John's Hospital, in St. Paul, equipped an emergency room for desperately ill patients, put eight beds into it, and staffed it with two nurses and two aides. Into this room, he put all of the intensely ill patients, regardless of diagnosis, on the theory that the important thing was to enable attending physicians to see each such individual more frequently, and also to enable the residents and nurses to give all of them constant attention.

The administrator at St. John's also established "general care halls," where the patient-nurse ratio was about 1:20. The people hospitalized in those parts of the institution weren't confined to bed, and could dress, take care of their own bathing and toilet requirements, go to the cafeteria, etc. Still other patients—those with continuing illnesses such as susceptibility to stroke—were sent home, and contact was kept with them through visiting nurses and the attending physicians.

The cost of the intensive care given to the desperately ill patients in the new emergency room, the MICHIGAN JOURNAL reports, was between $52 and $55 per day per patient, but round-the-clock special nurses had been costing at least $57 per 24-hour day, and better care could be provided with fewer staff members. The savings for the patient came from the reduced costs of convalescent care.

The MICHIGAN JOURNAL lists several institutions in its own state that are using modifications of the St. John's system. "There is an intensive service unit in operation in Battle Creek Community Hospital . . . assisted or financed by the Kellogg Foundation. The reports from the doctors who are using it are most glowing in every way. The patients are getting extraordinarily good care and are responding much quicker than under the old method of hospital service plus private nursing or special nursing."

Blodgett Memorial Hospital, in Grand Rapids, has an intensive care unit that is now two years old and in which over 450 patients have been cared for. It also has developed an intensive care unit for its pediatric section.

The University of Michigan Hospital, in Ann Arbor, has almost completed plans for an intensive service unit. The University doesn't feel that an ambulatory or self-help unit is necessary, because a similar service is now available at a nearby hotel.

Finally, as a part of its urban renewal program, Detroit is tearing down a slum section near four of its big hospitals, and structures on the order of nursing homes may be constructed there to house convalescent patients and senior citizens. In such facilities, they can be provided some hospital services at less cost than if they were regular bed patients.

* J. MICHIGAN M. SOC., 59:452-453, (Mar.) 1960.

HEALTH EDUCATION WORKSHOP

As it has been in previous years, the Iowa State Medical Society will be one of the organizations sponsoring the Twelfth Annual Health Education Workshop, June 15 and 16, at Drake University, in Des Moines.

The conference theme will be "Health for Better Family Living in the 60's," and it will focus on three topics: safety in the home, at school and on the farm; the role of the hospital in the community health program; and better family living for senior citizens.

Emphasis will be placed on group work, and participants will have an opportunity to discuss practical methods of meeting the challenges presented by the keynote speakers.

The complete agenda and registration cards will

be available May 1, from the Division of Health Education, Iowa State Department of Health, Des Moines 19.

A NEWSPAPERMAN MAKES A SUGGESTION

As we reported in a March editorial, the Pottawattamie County Medical Society held a very well-attended dinner meeting for the civic leaders of southwestern Iowa, on February 16, in an attempt to stimulate opposition to the Forand Bill. The guests were asked to communicate their views on the proposal to their senators and congressman, and follow-up letters or phone calls were used, a few days afterward, to find out whether each of them had done so.

One of them, Mr. Emmett E. Butler, editor and publisher of THE RECORD, at Treynor, Iowa, wrote the following letter in reply to the Pottawattamie County Society's inquiry. It contains a suggestion to which doctors everywhere should give a great deal of thought.

February 27, 1960

Mrs. Thordis K. Boylan, Executive Secretary
Pottawattamie County Medical Society
304 Grace Street
Council Bluffs, Iowa

Dear Mrs. Boylan:

In response to your recent inquiry I have included objections to the Forand Bill together with some other measures which appear plainly inflationary, excessive foreign aid, the school proposal, and the like, in several communications.

It is, however, becoming increasingly apparent that doctors are going to be fighting a losing battle against all forms of socialized medicine so long as they remain merely on the defensive. A good offense is always the best defense—they need to start counter-punching.

A fellow, young or old, who gets seriously sick lumps the cost of his medical care into one total; he will say: "That operation cost me $2,000." He doesn't compartment it into fees for doctors, hospital costs, and drug costs. Hospitals are being used now more than ever before because doctors insist on it, any case which cannot be handled as an office call is sent to a hospital, at a cost of $35-$40 per day for the patient. Doctors therefore have an area of responsibility in connection with these costs, they must either recognize it or accept the consequences of the swing toward socialization. I don't think socialization has the answer, either, but a growing number of other folks think that it has, or at least that it would be worth trying since our present system is not working out satisfactorily.

Many thanks to the Society for the February 16 dinner meeting. It was interesting and enjoyable.

Sincerely,

/S/ EMMETT E. BUTLER

MEDICAL LEADERSHIP IN REHABILITATION

The rehabilitation of the handicapped person to his maximum capacity for functional, social, and economic independence may require a coordinated process in which several professional groups participate.

Whether simple or complex, rehabilitation begins with medical care. Certainly, the physician is not the sole determinator of the full potentialities of the patient, and he must rely upon the social workers, the therapists and the vocational rehabilitation counselors for their professional contributions. The physician is responsible for determining the level of mental and physical improvement the patient is likely to reach, the intensity of medical and other services the patient is capable of accepting, and the time such services should begin. Likewise, it is his responsibility to the patient, throughout the entire rehabilitation procedure, to be certain that the latter's health status is maintained at an optimal level.

These medical functions are shared by all physicians, regardless of specialty, who care for patients with any disease or disorder which may leave a residual disability. Responsibility cannot be left for the very small number of physicians who have chosen physical medicine and rehabilitation as a specialty and have received board certification in this field as a mark of their exceptional professional competence.

Unfortunately, there are many physicians who have not taken an interest in or accepted responsibility for the rehabilitation aspects of their patients' medical problems. As a result, complaints of the following types are often made by nonmedical agencies administering rehabilitation programs, such as vocational rehabilitation, sheltered workshops or welfare medical care (Aid-to-the-Disabled):

1. Physicians frequently fail . . . to provide the necessary medical information to assist the agency in determining the eligibility of the patient for the rehabilitation program.

2. Physicians often write down, "totally disabled," without reporting any clinical findings to back up such a statement.

3. When adequate clinical reports are submitted, physicians often state that no rehabilitation services are indicated, when it is known by both medical and nonmedical members of the rehabilitation teams that patients with similar types of handicap often show good responses to rehabilitation.

4. On the basis of numerous studies of the prevalence of disabilities in a community, it appears that there are many patients just not being referred for available services.

5. When patients are referred, the physician's

request is often for a single service such as physical therapy or occupational therapy, when it is obvious to those experienced in rehabilitation that the person requires a comprehensive evaluation.

6. Physicians rarely consider the current labor market or the types of jobs available in the community when recommending handicapped patients for certain jobs. The most common complaint by employment specialists is that physicians state that the patient is suitable for "light work," without having any idea of what "light work" involves. The classic example is the referral of a patient for a position as night watchman, when it is well known that the watchman must make rounds through a multistoried building every hour and be ready to take quick action in case of fire or intruders.

Related to this lack of medical leadership is the tendency of nonmedical agencies to take for granted that they are the leaders in the rehabilitation field and that physicians play a very secondary role, simply a source from which medical services may be purchased. This seems to reach a peak in the current federal legislative proposal for "Independent Living Rehabilitation" (primarily a medical rehabilitation program for handicapped persons with no potentialities for return to employment) which would be placed in the vocational rehabilitation units of the states.

This bill (HR3465) is being sponsored by the National Rehabilitation Association. In a widely distributed "background statement" this Association declares that only vocational rehabilitation counselors have the philosophy and the experience to undertake such a program. While holding that rehabilitation for independent living is not primarily medical, the statement emphasizes that the vocational counselors have had lots of experience in running medical programs, and are perfectly capable of doing so.

Thus we see here the pattern which is characteristic of phenomena in other areas of medical care. Whenever physicians fail to exert the necessary leadership in medical problems, there will be lay groups ready to step in and do it for them. It is still our philosophy that physicians should have the key responsibility for problems which are primarily medical.

If the physician fails to carry out his role, there is the immediate danger of unfairness to the patient, who may thus not achieve his full potentialities. There is also the long-range danger of handing over medical problems to nonmedical groups on a silver platter.—I. J. B.

—Abbreviation of an editorial in *New York J. Med.*, 60:1218-1219, (Apr. 15) 1960.

THE 109TH ANNUAL AMA MEETING

The 109th Annual Meeting of the American Medical Association will be held in Miami Beach, June 13-17.

The opening general scientific meeting, Monday afternoon, June 13, will begin with the Joseph Goldberger Lecture on Clinical Nutrition. The lecture will be followed by a symposium on nutrition, including an address by Grace A. Goldsmith, professor of medicine, Tulane University School of Medicine, New Orleans, on "Highlights on the Cholesterol—Fats, Diets and the Atherosclerosis Problem."

The second general meeting will be a symposium on "Evaluation and Preparation of Patients for Anesthesia and Surgery," Tuesday morning, June 14, to which the sections on Anesthesiology, Diseases of the Chest, General Practice, Internal Medicine, Pediatrics, Pathology and Physiology, and Surgery have contributed. Participating will be Meyer Saklad, Providence, R. I.; Thomas Rardin, Columbus, Ohio; Eugene Turrell, Milwaukee, Wis.; John S. LaDue, New York City; Arlie R. Mansberger, Jr., Baltimore; George Meneeley, Nashville, Tenn.; Robert M. Smith, Boston, and C. Rollins Hanlon, St. Louis, Mo.

SECTION PROGRAMS

What's new in surgery will be explored during a symposium and panel discussion on Wednesday morning.

The symposium will be on "Recent Advances in Treatment of the Cancer Patient" with an introduction to the problem including methods of decreasing spread of cancer cells during operations being presented by Warren H. Cole, Chicago. Dr. Cole also will serve as moderator of the panel on "Current Status of the Treatment of Advanced Cancer of the Thyroid and Breast."

Arthur M. Master, New York City, will speak on "Effort, Occupation (including physicians') in Coronary Occlusion" during a symposium on Medical Chest Emergencies, and John F. Briggs, St. Paul, Minn., will discuss "Pulmonary Embolism."

John H. Moyer, Philadelphia, will moderate a symposium on "Edema—Its Physiology and Use of Newer Diuretics in Its Treatment." Irving S. Wright, New York, will moderate a symposium on "Pathogenesis and Treatment of Thrombo-embolic Phenomena." Daniel C. Moore, Seattle, Wash., will take part in a session on "Newer Trends in Diagnosis and Treatment" discussing "Oxygen—The Rational Therapy for Systemic Toxic Reactions From Local Anesthetic Drugs."

There will be a panel discussion on "Tumors of the Trachea and Bronchial Tree," with Paul H.

Holinger, Chicago, moderator, and one on "Disseminated Diseases of the Chest," with Harold O. Peterson, Minneapolis, moderator.

Highlights of other section meetings include:

Nervous and Mental Diseases—E. S. Gurdjian, Detroit, "Critique of Occlusive Disease of the Carotid Artery and the Stroke Syndrome." Leo H. Bartemeier, Baltimore, "Comments on the Relations Between Psychiatrists and Other Physicians."

Obstetrics and Gynecology—Stirling G. Pillsbury, Long Beach, Calif., "31,595 Deliveries With One Maternal Death." Jerome M. Kummer, Santa Monica, Calif., "An Answer for Criminal Abortion."

Internal Medicine—"Symposium on Hypocholesteremic Drugs." Walter L. Palmer, Chicago, "The Billings Lecture: Causality in Peptic Ulcer." Rudolph H. Kampmeier, Nashville, Tenn., "Collagen Diseases—Some Unanswered Questions."

Laryngology, Otology, and Rhinology—George A. Sisson, Syracuse, N. Y., "Problems and Complications in Head and Neck Surgery." C. M. Kos, Iowa City, Iowa, "Five Year Results of Stapes Mobilization and Current Results With Vein Plug Stapedeoplasty."

Preventive Medicine—Jan H. Tillisch, Rochester, Minn., "Medical Aspects of Safety in the Air." Robert B. Stonehill, San Antonio, Texas, "Air Travel and the Cardiopulmonary Patient," a film presentation.

Orthopedic Surgery—Sidney Keats, Newark, N. J., "Surgery of the Extremities in the Treatment of Cerebral Palsy." H. R. McCarroll, St. Louis, Mo., "The Management of Complicated Ununited Fractures of the Tibia and Fibula."

Pediatrics—Leonard S. Sommer, Miami, moderator, "Symposium on Congenital Heart Disease—Present-day Status From Viewpoint of Practitioner of Medicine."

Letters to the Editor

MORE ABOUT DR. PLASS

Sir:

A little further light on the late E. D. Plass (cf. "E. D. Plass and J. H. Randall, and Obstetrics and Gynecology at the State University of Iowa, 1926-1955," by Preston T. Brown, M.D., in the April JOURNAL).

I heard the late Lee Wallace Dean tell a small, informal group how, in considering a man to fill the Ob-Gyn chair at Iowa, he had asked J. Whitridge Williams, of Johns Hopkins, about Plass, and was told, "He's all right, but will have to take my place here some day."

Evidently the flaws in Plass's skills noted by Brown did not frighten the great Williams.

P. W. VANMETRE, M.D.
ISMS Historical Committee
Rockwell City, Iowa

"LET'S SUE THEM!"

Sir:

"Let's sue them," is actually what my neighbor said to me, and then he went on to say, "If we don't win, it won't cost us any attorney's fee." His grounds for starting a lawsuit were hardly justifiable, but since he wouldn't have to pay any attorney's fee if he lost his case, he was ready to start litigation.

The percentage of these unmerited lawsuits, often called "nuisance suits," that get into our courts is enormous. The Law Department of the AMA says, "The blunt truth is that the majority of all professional claims and suits filed are without merit; more than half involve physicians who are above the average of their respective groups in skill, experience and professional standing." But no person or business is immune from having unmerited charges filed against him or it by an unscrupulous plaintiff and his attorney.

THE INNOCENT PARTY PAYS

There is a loophole in our present law which makes nuisance suits profitable for those who engage in this type of practice and which legalizes what one might call an extortion racket. A plaintiff loses little when he loses his case, but wins much when he wins.

In the following actual example, the innocent party paid. Two men were racing down a street in their cars. In the race, one man—let's call him Smith—ran into the other car driven by Brown. What happened was that Smith, the wrongdoer, sued Brown, and Brown, the innocent party, had an expense of $900 in defending and clearing himself in court. Cases like this happen all over the country. What did the lawsuit cost Smith? Probably nothing but court costs. There was no attorney's fee for Smith to pay, for as is usual in such cases, his lawyer had taken his case on a contingent fee basis—no win, no pay. That's all legal under the law. If Smith, in the above instance, hadn't been able to pay court costs, the county would have had to pay them. Thus, in cases where the plaintiff has no money, our courts can be used for this vexatious litigation without either the

Statements published in these columns are not to be taken as reflections of the opinions or attitudes of the editors of the JOURNAL.

plaintiff's or the attorney's contributing a penny! If they fail, the attorney has lost only his time. But the defendant, though innocent, as I have said, had to pay $900 to clear himself. Little was lost by the plaintiff or his attorney.

A LUCRATIVE BUSINESS

On the other hand, if Smith's attorney had won the lawsuit, as happens in about one out of four cases brought against physicians, according to the AMA, the plaintiff and his attorney would have shared in the award, which often runs into thousands of dollars. The attorney's share is often as much as 50 per cent of the proceeds. As stated before, they win much when they are successful, but win or lose, all the expense of the action devolves upon the accused party.*

A SOLUTION

The way to strike a lethal blow at these nuisance suits is to plug up the loophole in our law which makes this legal racket lucrative. The loser in a lawsuit must be made to pay all expenses, including the fees of the winning party's attorney, just as is done in civil suits throughout most of Europe.

"The Austrian Code of Civil Procedure, in Section 41, provides that the losing party shall pay its adversary the costs, and that in case a schedule of fees is provided for the lawyer, the remuneration of the lawyer shall be made according to the table of fees."

"Section 130 of the French Code of Civil Procedure also provides that each party who fails in his suit shall be condemned to pay the costs. Section 133 includes a provision that the solicitors may demand that the costs and expenses allowed shall be paid to them upon proof that they have provided, out of their own pockets, the greater part of the current expenses. The Belgian Code of Civil Procedure has the same provision.

"The Italian Code of Civil Procedure (Sec. 91) also states that the losing party must bear the costs of the proceedings, and this includes the lawyer's fee. The German Code of Civil Procedure (Sec. 91) imposes payment of costs upon the losing party and contains detailed provisions (Para. 2, Sec. 91) on the extent counsel's fee shall be paid."**

WINNING ATTORNEY'S FEE REGULATED

The Europeans have a schedule of fees that the winning party's attorney has to abide by. This would not fix the winning party's attorney's fee, for he could charge his client an additional amount.

POOR MAN CAN SUE

The Europeans also have provisions enabling the poor man to sue if, upon examination, he has a legitimate case and it is not vexatious litigation.

These two principles just mentioned would be incorporated in our proposed law.

UNSCRUPULOUS DOCTOR

Sometimes an unscrupulous physician is also brought into nuisance suit cases. The physician supports the plaintiff's false claims of personal injury. Thus, a triumvirate goes forth to do legal battle—plaintiff, attorney and doctor—all for illicit gain at the expense of the innocent victims. Thus, closing the loophole in our law would also curb the unscrupulous doctor.

PRECEDENT ESTABLISHED

Under both federal and state law, in a few but a significant number of cases and under certain conditions, counsel's fees may be recovered by the winning litigant. But in both state and federal litigation, the general rule is that each party pays his own counsel's fees.

ISMS COMMITTEE FAVORS THIS PROPOSAL

The Legislative Committee of the Iowa State Medical Society unanimously approved a resolution sponsored by the Marion County Medical Society which proposed the legislation advocated here. The Legislative Committee then referred the resolution to the Medico-Legal Committee for further study. Further, five county Farm Bureaus have also approved a similar resolution to deter nuisance suits.

EFFECTS OF THE PROPOSED LAW

(1) There would be fewer nuisance suits if the plaintiff knew that if he lost his case he would have to pay all expenses, including the winning party's attorney's fee. (2) A person with a legitimate grievance could go to court, and upon winning his case would have all his expenses paid, including a reasonable fee for his attorney. He would remain whole, so to speak, and that is the way it should be. (3) A defendant would not be so likely to settle extortion cases out of court. (4) The congestion in some of our state courts would be done away with. New York State is now about four years behind in its court cases. (5) Insurance rates would be lowered, and perhaps some of the need for insurance would be eliminated. (6) A person would feel more secure if he knew that false charges were unlikely to be filed against him.

CONFLICT OF INTEREST

How to get such a law onto our statute books as here proposed is the big problem. There is a clear conflict of interest between the welfare of the public and the activities of the legal fraternity. What is a right and fair law for the benefit of all, including corporations, will give the lawyers less business.

* THE READERS DIGEST of March, 1960, has a related article entitled, "When the Lawyer Gets the Spoils."

** From a letter I received from the Library of Congress.

Although a large number of attorneys are of the highest ethical standing and although they frown upon this racket that the unscrupulous plaintiff and attorney practice, they do not seem to be in a position where they deem it politically wise to support legislation that would deter nuisance suits.

Because there is a conflict of interest, the lawyers have made no move to plug the loophole in our law. The attitude of the lawyers was shown when such bills were introduced in both houses of the last Iowa Legislature. These bills had as their objective the change that I have outlined. The bills referred to the Judicial Committee, where they were smothered by the lawyers, since they had a majority on this Committee.

It will require the cooperation of several state organizations and enlightened public opinion to establish the proposed law on our statute books. This law would benefit all of the people.

PETER VAN ZANTE, M.D.

Pella, Iowa



REVISED STANDARDS FOR MENTAL HEALTH CLINICS IN IOWA

(These Revised Standards were approved by the Executive Council of the Iowa State Medical Society on February 28, 1960, and supersede the Standards adopted on February 21, 1957.)

PURPOSES OF MENTAL HEALTH CLINICS

1. To provide outpatient psychiatric service for those who cannot afford services of private facilities.
2. To help prevent nervous and mental disorders.
3. To provide aid and treatment to persons suffering from personality and/or behavior disorders.
4. To counsel with the patient and members of his family on an outpatient basis.
5. To promote mental health education and the conservation of mental health.

PREREQUISITES TO ESTABLISHMENT OF A CLINIC

1. A board of directors should be appointed to work out the details of clinic establishment. The board of directors should be representative of the county or counties which will participate in the program. Membership should be from (a) Board of Supervisors, (b) County Medical Society, (c) schools, (d) courts, (e) clergy, and (f) industry.
2. Community support should be secured and sufficient financial aid provided to assure operation of the clinic for one year, and reasonable assurance should be secured that financial support will be continuing. This is essential to proper planning and offers some security to prospective employees.
3. Co-sponsorship with the county medical society should be secured *before* the actual establishment of the clinic. (a) The county medical society should be asked for approval of the fee schedule to be used—preferably a sliding scale as regards both income and number of members in the family. (b) The Clinic should not be established until a psychiatrist/director can be obtained who will take full responsibility for its organization and operation. (c) The psychiatrist/director should be employed with approval of the local county medical society. (d) Any ethical doctor in the local medical society shall have the right and be welcomed to work in the mental health clinic.
4. Mental health clinics should be established on a statewide priority basis so that there may be maximum use of the limited numbers of trained personnel, especially psychiatrists.

DUTIES OF PERSONNEL

1. *Psychiatrist:* (a) As medical director, he should be responsible for the administration and operation of the clinic. (b) The authority to determine the need of additional personnel and to employ and dismiss them should be delegated to, and vested in, the psychiatrist/director. (c) All tests, examinations, therapy, etc., must first be requested and approved by the medical director before performance of the service for the patient. (d) Social psychiatric history should be taken as a part of the patient's admission examination. (e) The medical director should require and receive all examinations performed in the center and then evaluate all this information to insure the best possible future treatment for the patient. (f) The medical director will personally supervise all psychotherapy. (g) He will not permit physical therapy to be given at the clinic; if needed, the patient will be hospitalized. (h) He will be responsible for the training of his staff. The board of directors hires personnel upon the recommendation of the psychiatrist/director. (i) He authorizes and audits official letters. (j) At the discretion of the psychiatrist/director, an executive secretary can be appointed.

2. *The Psychiatric Social Worker:* (a) Interviews all patients to determine the specific problem. If the patient cannot be properly treated at the clinic, the patient will be referred to the proper facility for assistance, upon the recommendation of the psychiatrist. (b) Compiles social histories and consults with referral sources. (c) Conducts direct casework interviews and group therapy sessions with patients and relatives. Cases are

assigned and supervised by the psychiatrist. (d) Lends leadership to mental health programs and works cooperatively with other agencies for the common social welfare. (e) Under the direction of the psychiatrist director, the psychiatric social worker having training qualifications will be responsible for the supervision of the students in training from graduate schools of social work and other staff social workers working in the facility.

3. *The Clinical Psychologist:* (a) Administers a variety of psychological tests to contribute personality findings in the diagnostic process. (b) Administers intelligence tests and makes reports in cases where only appraisal of intellectual capacity is requested by the medical director. (c) Conducts counseling interviews with patient and relatives at the discretion and under the supervision of the psychiatrist. (d) Maintains records of cases handled. (e) Under the direction of the Psychiatrist/-Director, the Clinical Psychologist having training qualifications will be responsible for the supervision of the students in training from graduate schools of clinical psychology and other staff psychologists working in the facility.

4. *Secretary-Receptionist:* (a) She maintains all administrative records necessary for the proper operation of the clinic under the direction of the psychiatrist. (b) She serves as receptionist for all office callers. (c) She takes dictation and types records, reports and correspondence. (d) She has bookkeeping responsibilities, prepares financial reports, collects fees, etc.

A PAMPHLET FOR YOUR PATIENTS

A new pamphlet, of which doctors may request as many copies as they need from the AMA, urges patients to hold the line on health insurance costs by using, not abusing, their health insurance.

Spelled out in the leaflet are some specific responsibilities which Americans share if they are to get optimum use of their coverages:

—Consider health insurance an "investment" in minimizing the impact of financing health care costs. Know what it is, what it can and cannot do, and how to use it properly.

—Don't expect health insurance to pay every expense related to health maintenance. Since it costs more, proportionately, to process small claims than it does larger ones, a multitude of the smaller ones put undue strain upon the company and necessitate increases in premiums.

—Don't pressure your physician into hospitalizing you unnecessarily. Some procedures can be performed with equal safety and efficiency and greater economy in the physician's office, thus reducing the overall cost of medical care.

—Remember, you don't have to "collect" on your insurance to win. You win when you are spared the consequences of an accident or illness against which your insurance or prepayment plan protects you.

The leaflet, entitled "Let's Use, Not Abuse Health Insurance," is a joint product of the AMA's Committee on Insurance and Prepayment Plans and its Communications Division. Doctors are asked to keep copies of it accessible to their patients in their waiting rooms.

ARTHRITIS AND RELATED DISEASES

There will be a Postgraduate Seminar in Arthritis and Related Diseases at the Diplomat Hotel, in Hollywood-by-the-Sea, Florida, on June 11-12, immediately following the annual meeting of the American Rheumatism Association, and immediately preceding the annual meeting of the AMA. The registration fee is $15, and the course is acceptable for eight hours of Category I credit by the American Academy of General Practice.

Saturday, June 11

1:45 p.m. "Pathology of Rheumatic Disease"—Leon Sokoloff
2:30 "Rheumatic Fever"—Gene H. Stollerman
3:15 "Gout and Its Management"—Alexander B. Gutman
4:15 "Osteoarthritis"—Edward F. Rosenberg

Sunday, June 12

9:00 a.m. "Rheumatoid Arthritis: Diagnosis and Relationship to Collagen Diseases"—Charles Ragan
9:45 "Medical Management of Rheumatoid Arthritis"—Theodore B. Bayles
10:45 "Diagnosis and Management of Juvenile Rheumatoid Arthritis and Rheumatoid (Ankylosing) Spondylitis"—Joseph L. Hollander
11:30 "Clinical and Pathologenetic Significance of Post-Steroid Withdrawal Phenomenon"—Philip S. Hench
12:15 p.m. LUNCHEON ROUNDTABLES
Synovial Fluids
Drug Evaluation
Metabolic Bone Disease
Orthopedic Treatment of Chronic Arthritis
1:45 "Infectious Arthritis"—Lawrence E. Shulman
2:30 "Laboratory Studies Useful in Diagnosis and Treatment of the Collagen Diseases"—Morris Ziff
3:15 "The Present Status of Physical Medicine in the Treatment of Arthritis"—Edward W. Lowman
4:15 PANEL DISCUSSION OF THE TREATMENT OF RHEUMATOID ARTHRITIS

Physicians may register in advance and reserve accommodations at the hotel by mail. Address: Seminar Committee, Forida Chapter, Arthritis and Rheumatism Foundation, 1206 Huntington Medical Building, Miami 32.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

BIOCHEMISTRY OF HUMAN GENETICS (Ciba Foundation Symposium Series), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Cecelia M. O'Connor*, B.Sc. (Boston, Little, Brown and Company, 1960. $9.50).

THE LIFESPAN OF ANIMALS (Ciba Foundation Colloquia on Ageing, Vol. 5), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Maeve O'Connor*, B.A. (Boston, Little, Brown and Company, 1960. $9.50).

SIGNIFICANT TRENDS IN MEDICAL RESEARCH (Ciba Foundation 10th Anniversary Symposium), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., M.C.R.P., *Cecilia M. O'Connor*, B.Sc., and *Maeve O'Connor*, B.A. (Boston, Little, Brown and Company, 1960. $9.50).

MEDICAL CARE OF THE ADOLESCENT, by *J. Roswell Gallagher*, M.D. (New York, Appleton-Century-Crofts, Inc., 1960. $10.00).

FIRST AID: DIAGNOSIS AND MANAGEMENT, FIFTH EDITION, by *Warren H. Cole*, M.D., and *Charles B. Puestow*, M.D., with 16 contributing authors. (New York, Appleton-Century-Crofts, Inc., 1960. $6.25).

COMMUNICABLE AND INFECTIOUS DISEASES, FOURTH EDITION, by *Franklin H. Top*, M.D. (St. Louis, C. V. Mosby Company, 1960. $20.00).

FROM FISH TO PHILOSOPHER, THE STORY OF OUR INTERNAL ENVIRONMENT, by *Homer W. Smith* (Boston, Little, Brown and Company, 1960. $).

ON THE HISTORY OF MEDICINE, ed. by *Felix Marti-Ibanez*, M.D. (New York, MD Publications, Inc., 1960. $6.75).

VIRUS VIRULENCE AND PATHOGENICITY (Ciba Foundation Study Group No. 4), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.R.C.P., and *Cecilia M. O'Connor*, B.Sc. (Boston, Little, Brown and Company, 1960. $2.50).

PEDIATRIC GYNECOLOGY, ed. by *John W. Huffman*, M.D., and OBSTETRIC EMERGENCIES, ed. by *Martin L. Stone*, M.D. (Vol. 3, No. 1 of CLINICAL OBSTETRICS AND GYNECOLOGY. (New York, Paul B. Hoeber, Inc., 1960. $18 per year for four issues).

BOOK REVIEWS

A PRACTICAL GUIDE TO GENERAL SURGICAL MANAGEMENT, by *Julian A. Sterling*, M.D. (New York, Vantage Press, Inc., 1960. $3.00).

This book, written by the senior attending surgeon at the Albert Einstein Medical Center, in Philadelphia, is directed primarily to the house staff of that hospital, but it will also be of interest to doctors in similar situations in other hospitals.

The contents of the book are well outlined, and the material is very succinctly presented. However, the quality of the paper leaves much to be desired. The absence of diagrams and illustrations, I consider to be a weak point about this manual. And another weakness is the fact that portions of the book have been written specifically for the Albert Einstein Medical Center, and are inapplicable elsewhere. On the positive side, it might be mentioned that the price of the volume is very reasonable. The book is recommended only for doctors at the intern level.

It might be mentioned here that the American College of Surgeons has a limited number of lecture outlines from its 45th Annual Clinical Congress. These were taken from potgraduate courses on pre- and postoperative care, and are based on case-analysis presentations. The interested reader is referred to a recent issue of this JOURNAL, in which a similar book was reviewed.—*Alfred N. Smith*, M.D.

A DOCTOR ENJOYS SHERLOCK HOLMES, by *Edward J. Van Liere, M.D.* (New York, Vantage Press, Inc., 1960. $3.00).

The author has made a hobby of correlating medical data presented in the various stories about Sherlock Holmes and Dr. Watson, by Sir Arthur Conan Doyle. By virtue of his studies, the reader is provided with a review of the medical talent afforded during that era, and should be pleasantly surprised to learn how capably Sir Arthur correlated medical facts in these stories.—*Everett M. George*, M.D.

THE TEEN-AGE YEARS, A MEDICAL GUIDE FOR YOUNG PEOPLE AND THEIR PARENTS, by *Arthur Roth*, M.D. (New York, Doubleday & Company, Inc., 1960. $3.95).

The author has prepared a volume on health problems particularly common among teenagers, and has presented his facts well. The only criticism to be offered is that in a few instances he could well have translated his medical terminology into the layman's terms that would be more readily understood by young people.—*Everett M. George*, M.D.

THE MODERN FAMILY HEALTH GUIDE, by MORRIS FISHBEIN, M.D. (New York, Doubleday & Co., 1959.).

Morris Fishbein, the experienced medical editor, has compiled a popular "Health Guide." The book is quite large, and is composed, really, of two parts: (1) general chapters on various disease entities and subjects of interest to the layman such as "Diet and Health," "Prenatal Health and Childbirth," "Diseases of the Heart," and "Disorders of the Liver and Gallbladder," and (2) an encyclopedia of various medical terms. The chapters in the first part of the book have been written by various individuals; the latter half, I presume, has been compiled by the editor himself. The whole book is on non-glossy, easy-to-read paper, without more than an occasional illustration or graph.

The book, then, represents another in a series of popular health guides. Dr. Fishbein makes the point

that whereas formerly doctors were upset at finding that the patient had any medical knowledge at all, feeling that "a little knowledge is a dangerous thing," nowadays the doctor is all to often appalled by the patient's *lack* of medical knowledge, and upset by the patient's unjustifiable fears—fears that Dr. Fishbien believes are due to a lack of adequate knowledge of the subject.

The book, of course, is excellently and professionally conceived and written, and if Dr. Fishbein is correct in thinking that the public needs more medical knowledge, the book should be well suited for schools and homes.—*Daniel A. Glomset,* M.D.

BIOPSY MANUAL, by *James D. Hardy,* M.D., *James C. Griffin, Jr.,* M.D., and *Jorge A. Rodriguez,* M.D. (Philadelphia, W. B. Saunders Company, 1959. $6.50).

This book has filled a very definite hiatus in our medical literature. It is broad in scope and is of interest to most generalists and most specialists, alike. It certainly should be accessible to all who are engaged at any time in doing biopsies, whether major or minor.

I am certain that you will be amazed at the wealth of valuable information this book contains—both general information on biopsies and specific instructions regarding technics.

It is a very well arranged book, extremely readible and adequately illustrated.—*A. N. Smith,* M.D.

TRAVELER'S GUIDE TO GOOD HEALTH, by *Coulter Rule,* M.D. (New York, Doubleday & Co., 1960. $3.95).

The author has made a compendium of health requirements for travelers leaving the country, enumerating the common diseases they will find in different parts of the world and offering tips for the care of children who go along on these journeys. There is an appended glossary of medical terms.

It is questionable that anyone traveling by air would choose to include this book in his luggage, but many people who are planning trips abroad would benefit from referring to it.—*Everett M. George,* M.D.

SMOKING AND HEALTH (a revised version of SMOKING AND CANCER), by *Alton Ochsner,* M.D. (New York, Julian Messner, 1959. $3.00).

All doctors and layman should read this book, for it gives facts and figures by research authorities about the relationship between smoking and health. Although only 100 pages long, it seems to include everything one should know about the subject.

The death rate from all causes has been found to be 58 per cent greater among smokers than non-smokers. Lung cancer and coronary heart disease, it has been determined, have been 63 per cent higher in smokers than non-smokers.

The tobacco industry offers filtration as a preventive, and has denied the reliability of scientific reports.

The industry has a sales volume of $6,000,000,000 per year, plans to spend $150,000,000 for advertising this year, and gives employment to millions of people. The U. S. government has 800,000,000 lbs. of surplus tobacco in storage.

Dr. Ochsner tells his readers how to smoke filtered king-size cigarettes with a minimum of danger, and says that pipes and cigars impart the least harm, but he advises against *all* smoking.

He describes the symptoms of beginning cancer of the lungs, and reports that he operates upon two to five lung-cancer patients each week. Out of a series of 1,457 cases brought to him by colleagues, 558 were too far advanced for treatment.

Dr. Ochsner's plea is for all to stop smoking, but for those who think they can't stop, he advises frequent x-rays and checks of symptoms, so that lung cancer can be diagnosed early, when there still is a chance to save life.

The public is less thoroughly aware that many heart attacks are caused by smoking.—*Nelle S. Noble,* M.D.

THE YEAR BOOK OF GENERAL SURGERY, ed. by *Michael E. DeBakey,* M.D. (Chicago, The Year Book Publishers, Inc., 1959. $8.00).

The editors of the YEAR BOOK OF SURGERY have done a superb job of abstracting the volumes of surgical literature that were printed during the year 1959. In this volume, as in previous ones, all of the systems are covered, as are allied fields such as anesthesiology.

This book is a *must* for all surgeons. It provides the only way I know for the practicing surgeon to keep up-to-date with the current surgical literature.—*Charles C. Edwards,* M.D.

NOW OR NEVER, THE PROMISE OF THE MIDDLE YEARS, by *Smiley Blanton,* M.D. (New York, Prentice-Hall, Inc., 1960. $4.95).

This book relates some of a psychiatrist's experiences as he worked with a clinic operated under the auspices of a church. It is well illustrated with examples of the problems of the middle-aged, and doubtless will prove popular to lay readers. Psychiatrists may find this volume helpful as a source book.—*Everett M. George,* M.D.

THE YEAR BOOK OF DRUG THERAPY (1959-1960 Year Book Series), ed. by *Harry Beckman,* M.D. (Chicago, The Year Book Publishers, Inc., 1960. $8.50).

Something new has been added! In past years one scarcely needed to review THE YEAR BOOK OF DRUG THERAPY, for though the succeeding issues were excellent, each review was perforce a carbon copy of its predecessor. This year's overall coverage of the important contributions in the field of drug therapy is as good as ever, but Dr. Beckman has now added a section entitled "A Critical Evaluation of the Year's New Drugs." Set apart by blue paper, it is a thoughtful compendium of the author's opinions of the new pharmaceuticals. The reader will do well to compare his own opinions of his "favorite" preparations with those of the editor.

The introduction to this new section is particularly worthwhile, for it discusses the relationship of the pharmaceutical firm to new-drug advertising, and suggests methods for evaluating new drugs—methods that are available to every physician and will liberate him from his dependency upon advertising and drug displays in his selection of therapeutic agents.—*Samuel J. Zoeckler,* M.D.

Iowa Academy of General Practice

HIGHLIGHTS OF THE TWELFTH ANNUAL AAGP MEETING

The Twelfth Annual AAGP Congress of Delegates and Scientific Assembly was held in Philadelphia about a month ago. In the annual election of officers, Dr. Floyd C. Bratt, of Rochester, New York, was named president-elect, and Dr. James D. Murphy, of Fort Worth, was made vice-president. The three new members elected to the Board of Directors for terms of three years each are Dr. Donald H. Kast, of Des Moines, Dr. Walter Sackett, of Miami, and Dr. Julius Michaelson, of Foley, Alabama. Dr. Carroll Witten, of Louisville, was elected speaker of the Congress of Delegates, and Dr. Lewis Cellio, of Columbus, Ohio, was chosen as vice-speaker.

Briefly, the following are some of the actions taken by the Congress of Delegates. It was voted to raise the membership eligibility requirements so that all applicants for Academy membership who graduate from medical school after January 1, 1966, will need to have had at least two years of hospital training. At that time, the present (third) alternative requirement for membership eligibility will be deleted.

The proposal for establishing a certifying board for general practice was rejected for the time being. This action was thought necessary, in part at least, because a corporation calling itself "The American Board of General Practice" was recently created without the knowledge, consent or approval of the American Academy of General Practice. The following is a statement by Floyd C. Bratt, M.D., chairman of the Academy's Board of Directors: "The Board of Directors of the Academy of General Practice is unalterably opposed to the formation of any Board of General Practice created outside the official ranks of the American Academy of General Practice. When the time comes that this Academy feels a Board of General Practice of Family Physicians would be of value, the Academy should establish such a Board through official channels.

"We repudiate the creation of an American Board of General Practice without the knowledge, consent or approval of the only society of general practitioners in America. Notwithstanding the implication in its charter that it represents the Academy, we deny responsibility for its parentage, and we recommend that members of the American Academy of General Practice decline to affiliate with this or any other Board which is without official status in organized medicine."

The delegates went on record as strongly opposing any forms of payment which show a difference in the relative value or fee schedule, based upon similar services rendered by general practitioners, part-time specialists and specialists.

Among the many chapter favors at the Congress of Delegates, the Iowa Chapter presented each delegate and alternate delegate with a package of sweet corn seed, and an appropriate card instructing him to plant the corn or to give it to someone who would. Thus, while enjoying the sweet corn next summer, each man would be reminded of Iowa's place in the production of corn.

The Iowa Chapter was very proud, at this session, first, for Dr. Donald H. Kast's being elected to membership on the Board of Directors of the AAGP for a term of three years. We all know of Don's sincere interest in the organization, and we all know of his capabilities. So, apparently, did a sufficient number of delegates from other states.



Dr. Donald H. Kast

Second, the Iowa Chapter was proud to receive the first-place membership award. This is the second consecutive year that the Iowa Chapter has been awarded first place, and the fourth year that it has received one of the top awards—second-place in 1954; third place in 1957; and first place in 1958. Iowa's is the only chapter ever to have received this number of membership awards.

A record number of scientific exhibits were presented (137), and 16 of them were by Academy members. These exhibits provided the visiting physicians with a wide variety of medical information.

The overall registration for the Scientific Assembly was 7,506, of which number 3,578 were physicians, and the remainder were technical and scientific exhibitors, doctors' wives and guests. There were 27 members attending from the Iowa Chapter.

The Thirteenth Annual Scientific Assembly and Congress of Delegates will be held at Miami Beach, April 17-20, 1961. Start making plans now for this Florida meeting.

DRUG TREATMENT OF PULMONARY TUBERCULOSIS

An Interim Report by the Committee on Therapy of the American Trudeau Society*

The Committee on Therapy has reviewed the statements on the treatment of tuberculosis published in 1955 and in 1958.[1, 2] Developments that have occurred since 1958 were thought to be of sufficient interest for an interim progress report at this time.

The principal developments relate to: (a) single-drug therapy in selected patients, (b) combinations of three drugs versus two, (c) isoniazid in high dosage, (d) pyrazinamide, (e) streptomycin-pantothenate, (f) streptovaricin, (g) cycloserine, (h) thiocarbanidin, (i) kanamycin, and (j) adjuvant adrenocorticosteroid and corticotropin therapy in tuberculosis. Since there have been no recent developments relative to viomycin, its role remains secondary, and its use as a companion drug is recommended when combinations of other drugs cannot be used for one reason or another.

SINGLE-DRUG THERAPY WITH ISONIAZID

Isoniazid in adequate dosage, combined with one or more of the other antituberculous drugs, is the currently accepted drug regimen of choice. However, studies of the short-term (four to eight months) effectiveness of isoniazid alone as compared with isoniazid plus PAS indicate that isoniazid alone is as effective as isoniazid plus PAS in the treatment of minimal and moderately advanced non-cavitary disease.[3] It remains to be determined whether isoniazid alone will suffice for long-term therapy of this type of tuberculosis. The use of isoniazid alone offers the advantages of better patient acceptance of medication and lower cost of treatment. . . .

COMBINATION OF THREE DRUGS VERSUS TWO

The therapeutic superiority of a regimen of three drugs (streptomycin, PAS and isoniazid) over two-drug regimens containing isoniazid has not been demonstrated by clinical studies.[4] Moreover, the addition of a third drug to a two-drug regimen arithmetically increases the toxicity. However, it has been reported, but not confirmed, that in resected lesions fewer tubercle bacilli resistant to drugs were found when a triple-drug combination has been used than when a two-drug regimen has been followed.

ISONIAZID IN HIGH DOSAGE

Can the therapeutic efficacy of isoniazid be improved by increasing the conventional adult dosage of 3 to 5 mg. per kg. per day to a higher dosage of 12 to 24 mg. per kg. per day? The technique of performing urine and blood serum bioassays of active isoniazid is being more widely adopted in many laboratories. Clinically, more has been learned concerning the characteristics of slow and rapid inactivators of isoniazid. There is need to determine whether in either group, but particularly in the rapid inactivator group, higher dosages of isoniazid improve its efficacy. . . . It is recommended that, when the dosage of isoniazid is increased, a minimum dosage of 50 mg. of pyridoxine per day be added to protect against possible isoniazid toxicity.

PYRAZINAMIDE

Pyrazinamide used alone has only a limited effect. Its potential for serious hepatotoxicity, necessitating frequent liver-function tests, restricts its use to hospitalized patients. It is not recommended for long-term therapy. The oral adult dose of pyrazinamide is 1 Gm. three times daily. Doses lower than this, although they reduce its toxic effect, appear to compromise the drug's therapeutic effectiveness.[5]

STREPTOMYCIN-PANTOTHENATE

The use of streptomycin-pantothenate as a substitute for streptomycin-sulfate does not reduce the damage to the eighth cranial nerve. This observation confirms the unfavorable reports on steptomycin-pantothenate published in the European literature. On the other hand, most of the favorable reports in the European literature were in regard to the effective use of dihydrostreptomycin-pantothenate as compared with dihydrostreptomycin-sulfate in reducing the toxicity of

* Reprinted from AMERICAN REVIEW OF RESPIRATORY DISEASES, 81:438-440, (Mar.) 1960.

the eighth nerve. The few reported attempts in the United States to evaluate dihydrostreptomycin-pantothenate have not supported this finding.[6] Dihydrostreptomycin-pantothenate is believed to offer no advantage over other streptomycin or dihydrostreptomycin drugs.

STREPTOVARICIN

Streptovaricin is a product of Streptomyces spectabilis isolated from soil near Dallas, Texas. In animal experiments, streptovaricin enhanced the action of isoniazid to a greater degree than any other companion drug tested, except pyrazinamide. In human trials, streptovaricin in a single oral dosage of 3 Gm. per day is poorly absorbed, and in combination with isoniazid (300 mg. per day) has no therapeutic advantage over isoniazid alone. Streptovaricin in a dosage of 10 Gm. per day can be tolerated. However, it is not known whether its therapeutic efficacy can be enhanced by this higher dosage.

CYCLOSERINE

Cycloserine has been demonstrated to be an active drug in the treatment of previously untreated cases of pulmonary tuberculosis. Administered orally to adults in dosages of 0.5 Gm. twice daily, it causes convulsions in approximately 8 per cent of the patients treated. This toxicity has been reduced significantly by lowering the dosage to 0.25 Gm. twice daily. In combination with isoniazid, cycloserine in this lower dosage is approximately as effective as isoniazid plus PAS except in patients with far advanced cavitary disease. In view of this, cycloserine might be used as a substitute for PAS. Under certain circumstances, the toxic effects of high doses of cycloserine on the central nervous system have been reported to be controlled, if not prevented, by concomitant administration of sedatives, anticonvulsants, tranquilizing agents and pyridoxine, singly or in combinations.[7] . . .

THIOCARBANIDIN

Thiocarbanidin, a thiocarbanilide derivative, is active against experimental tuberculosis in mice and guinea pigs. Cross resistance between thiocarbanidin and amithiozone has been demonstrated *in vivo*. Thiocarbanidin is poorly absorbed from the human gastrointestinal tract. In man, a single oral dose of 1 Gm. of thiocarbanidin per day is less effective than PAS in delaying resistance to isoniazid and probably to streptomycin. . . .

KANAMYCIN

Kanamycin, a broad-spectrum antimicrobial, isolated from the culture broths of Streptomyces kanamyceticus by Ueda and associates in Japan in 1957, is effective against experimental and human tuberculosis. Kanamycin is closely related to neomycin. Resistance to kanamycin develops quite rapidly. Cross resistance to neomycin and to viomycin has been demonstrated. At a dosage of 1 Gm. per day (0.5 Gm. twice daily intramuscularly) auditory toxicity is a common and serious complication of prolonged therapy. Renal toxicity, manifested by proteinuria or cylindruia, frequently occurs.

ADRENOCORTICOSTEROIDS AND CORTICOTROPIN

Beneficial effects from the addition of adrenocorticosteroids and corticotropin have been reported in the treatment of tuberculous menigitis, miliary tuberculosis, pleurisy with effusion and hypersensitivity to antituberculous agents. The mechanism by which the hormones may reverse an unfavorable course and perhaps accelerate the improvement beyond what may be expected from antimicrobial therapy alone remains obscure. The phenomenon is not totally explained by anti-inflammatory effect, by adrenocortical replacement in adrenal exhaustion, or by alterations that occur at the cellular level to make the tuberculous infection more susceptible to drug treatment. A large body of recorded clinical experience indicates that adjuvant hormone therapy is less dangerous than had been feared. . . .

REFERENCES

1. American Trudeau Society: Am. Rev. Tuberc., 1955, 72:408.

2. American Trudeau Society: Am. Rev. Tuberc., 1958, 78:656.

3. Phillips, S.: Results of original course of isoniazid chemotherapy for minimal or non-cavitary, moderately advanced tuberculosis. Tr. 17th Conference on the Chemotherapy of Tuberculosis, Veterans Administration-Armed Forces, 1958, p. 112.

4. Livings, D. G.: Results of original course of chemotherapy for tuberculosis: data from cooperative study, general regimens. Tr. 18th Conference on the Chemotherapy of Tuberculosis, Veterans Administration-Armed Forces, 1959, p. 18.

5. Matthews, J. H.: Pyrazinamide-INH in treatment of pulmonary tuberculosis: data from cooperative study, general regimens. Tr. 18th Conference on the Chemotherapy of Tuberculosis, Veterans Administration-Armed Forces, 1959, p. 106.

6. Donohoe, R. F., *et al.:* Daily dihydrostreptomycin-pantothenate combined with massive doses of Salizid® in treatment of pulmonary tuberculosis. Tr. 17th Conference on the Chemotherapy of Tuberculosis, Veterans Administration-Armed Forces, 1958, p. 349.

7. Pyle, M. M., *et al.:* Cycloserine in high dosage in "salvage cases" of pulmonary tuberculosis with control of toxicity by concomitant medication; efficacy as medical and presurgical treatment. Tr. 18th Conference on the Chemotherapy of Tuberculosis, Veterans Administration-Armed Forces, 1959, p. 128.

SPRING POSTGRADUATE CONFERENCE

Make arrangements now to attend the IAGP Spring Postgraduate Conference with your family. It is to be held at the New Inn, Lake Okoboji, June 13-15. Entertainment is being planned for your wife and children while you are at the scientific sessions each morning. The afternoons will be free for your relaxation. Be sure to read the entire program in the March-April issue of HAWKEYE GP NEWS.

STATE DEPARTMENT OF HEALTH

Edward D. Zimmer
COMMISSIONER

MORBIDITY REPORT FOR MONTH OF MARCH—1960

Diseases	*1960 Mar.*	*1960 Feb.*	*1959 Mar.*	*Most Cases Reported From These Counties*
Diphtheria	0	1	0	
Scarlet fever	376	291	516	Des Moines, Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	166	125	2653	Clay, Des Moines, Poweshiek
Whooping cough	10	4	15	Polk
Brucellosis	22	40	16	Johnson, Scott
Chickenpox	516	742	903	Dubuque, Linn, Polk, Scott
Meningococcic meningitis	1	1	1	Woodbury
Mumps	461	399	312	Buena Vista, Des Moines, Polk
Poliomyelitis	0	1	0	
Infectious hepatitis	54	48	12	Monona, Pottawattamie, Woodbury
Rabies in animals	12	13	13	Dickinson, Kossuth, Poweshiek
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	66	36	39	For the state
Syphilis	84	83	73	For the state
Gonorrhea	100	83	58	For the state
Histoplasmosis	1	3	0	Black Hawk
Food intoxication	0	0	68	
Meningitis (type unspecified)	2	4	0	Boone
Diphtheria carrier	0	5	0	
Aseptic meningitis	0	0	0	
Salmonellosis	0	1	4	
Tetanus	0	0	0	
Chancroid	0	0	0	
Encephalitis (type unspecified)	0	0	1	
H. influenzal meningitis	1	0	0	Polk
Amebiasis	0	0	0	
Shigellosis	3	9	6	Hamilton, Humboldt, Linn
Influenza	902	9890	788	Buena Vista, Guthrie, Polk

PENCIL URGED ON NEW SPECIMEN FORMS

An improved recording and reporting system at the State Hygienic Laboratory in Iowa City is expected to provide doctors throughout the state with faster service on specimens sent to the Laboratory for examination.

A key to the new system's success is the common lead pencil.

I. H. Borts, M.D., director of the Laboratory, says it is important that doctors and members of their office staffs use soft or medium-soft black lead pencils in filling out the new examination forms employed in the procedure. The new forms will gradually replace the present ones as doctors ask for replenishment of the specimen kit supplies.

IMPORTANT INFORMATION FOR ALL DOCTORS IN IOWA

The new system involves the use of copying equipment that reproduces exact file copies of the forms which doctors send in with specimens. This eliminates the current time-consuming practice of clerks' transferring information from each request form to office file forms.

The duplicating process will not work with most colored inks, pencils or ball-point pens. The soft or medium-soft black lead pencil is essential to the copying process.

After examination results have been entered on exact machine copies of the original request forms, they are folded and inserted into "window" envelopes for return to the physician. That part of the form on which the doctor prints his name and address is placed in the envelope "window." This necessitates legible printing when the request form is filled out in the doctor's office.

Dr. Borts says one of the greatest advantages in the introduction of the new procedure is that the Laboratory will keep on file the original forms sent in by physicians. Should completed forms become misplaced or lost in the return mails, the doctor may receive duplicate copies from the laboratory.

NEWLY REPORTED CASES OF TUBERCULOSIS IN IOWA, BY COUNTIES AND BY MONTHS—1959

Counties	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
Adair													
Adams													
Allamakee						1							1
Appanoose			1	1								1	3
Audubon													
Benton													
Blackhawk	1		1		4			2	1	1		4	14
Boone										2			2
Bremer										1			1
Buchanan	1				1							1	3
Buena Vista								1		1			2
Butler										1			1
Calhoun	1		1										2
Carroll						1			1				2
Cass				1									1
Cedar							1	1					2
Cerro Gordo					1			1					2
Cherokee	1								1		1		3
Chickasaw										1			1
Clarke													
Clay							2		1				3
Clayton	1							2		1			4
Clinton	2			1				1	1	3	1	1	10
Crawford												1	1
Dallas										1			1
Davis													
Decatur	1		1										2
Delaware					1			1	1				3 — 1
Des Moines				1	2	1	1					1	6 — 1
Dickinson			1										1 — 1
Dubuque		1	2		1	4		1		1	2	3	15
Emmet										1			1 — 1
Fayette			1		1		3		1				6
Floyd				1	1		2			1	1		6
Franklin										2			2
Fremont			1							2			3
Greene									1				1
Grundy						1			1				2 — 1
Guthrie									1	1	1		3
Hamilton			1									2	3
Hancock												1	1
Hardin			2	1	1						1		5
Harrison										1			1
Henry													
Howard				1								1	2
Humboldt			1										1 — 1
Ida										1			1
Iowa	1			1				1	1	1			5 — 1
Jackson		1			1						1		3
Jasper			1										1
Jefferson	1			1				1					3

Counties	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Johnson	1	1				2	1		1				6 — 1
Jones		1						2				1	4 — 1
Keokuk				1									1
Kossuth					1		2						3
Lee	1				1					2			4
Linn	3	4	3	3	1	5	1	3	3	7	2	1	36 — 1
Louisa	1								1				2 — 1
Lucas		1											1
Lyon											2		2
Madison	3				1								4
Mahaska	1		1					1					3
Marion			3										3
Marshall	2	1		1	2			2					8
Mills			1		1								2
Mitchell					1				1				2
Monona	2					1							3
Monroe			1								1		2
Montgomery													
Muscatine					1	1		1				1	4
O'Brien			2										2
Osceola			1										1
Page										1			1
Palo Alto						1						1	2
Plymouth										1	1		2
Pocahontas													
Polk	5	7	7	5	9	2	2	7	3	6	3	9	65 — 2
Pottawattamie	2		1			2	1	4	1	1		2	14
Poweshiek													
Ringgold						1				1			2
Sac	1					1							2
Scott	3	2	2			1		2	2	1		2	15
Shelby													
Sioux												1	1
Story	1			1			1	1		1		1	6
Tama													
Taylor							1						1
Union									1				1
Van Buren												1	1
Wapello			2	2			1	2		1		1	9
Warren						1	1						2
Washington										1			1
Wayne						1							1
Webster									1	1		1	3
Winnebago	1												1
Winneshiek	1				1			1	2		1		6 — 1
Woodbury	1	1	1			14		7		2	1	1	28 — 1
Worth		1									2		3
Wright		1						1		2		1	5
Total	39	22	39	22	33	41	20	46	27	51	21	40	401 —15
													15
												Total—New Cases	386

NOTE: 15 cases have been deleted because of change of diagnosis.

In the Public Interest



Doctors Oppose Attaching Health Care To the Social Security System

During the past several months, the physicians of Iowa together with their colleagues in other states and likeminded laymen throughout the country have been exerting all their efforts to block passage of the Forand Bill. To date, they haven't been disappointed in that undertaking, but neither have they been finally successful.

The doctors and their allies hold that passage of Forand-type legislation would be a first step—and a very long one—toward socialized medicine, and that the socialization of medicine would go a long way toward ending the free-enterprise system in America.

OASI BENEFICIARIES AREN'T ALL EITHER OLD OR NEEDY

The Forand Bill, or any of the proposals that closely resemble it, would provide health services to all beneficiaries of Old Age and Survivors Insurance under the federal Social Security System, a group of people who constitute an economic cross-section of American citizens. Most, though by no means all of them, are elderly, but a rapidly increasing share of them have considerable net worths and/or incomes from private pension plans, savings accounts, securities, etc., plus amounts up to $1,200 per year in wages and salaries. Thus, the Forand Bill and the proposals that resemble it, rather than providing health care only to the needy aged, would provide such services to many people who could easily pay for it themselves, as well as to some people who could not.

Since these schemes aren't ideally fitted to their purpose, they invite prompt and prohibitively expensive expansion. No one who has been following the actions of Congress for 10 years or more needs be reminded of the regularity with which Social Security benefits have been "liberalized," but for the sake of the record, attention should be called to the facts that only two years ago the totally disabled were declared eligible for OASI benefits at 50 years of age, and that this year the disabled of all ages will be made eligible for them.

Similarly, if OASI beneficiaries—who include some but by no means all of the needy aged, along with some comparatively well-to-do elderly people and rather large numbers of young widows and their children—were to be granted health benefits at federal expense this year, it would immediately become apparent that the measure just passed hadn't accomplished its stated purpose. No one, in that event, would seriously consider repealing the act. Rather, there would be overwhelming pressure at the next session of Congress for extending the benefits to all of the aged who are not OASI recipients, and at succeeding sessions there would be proposals for extending them to first one group of people and then another until all were receiving health care at federal expense.

THE SOCIAL SECURITY SYSTEM COULDN'T STAND THE STRAIN

Now for the technic proposed for the financing of Forand-type programs. It would be particularly unfortunate to attach any such scheme to the Social Security System. OASI has never been actuarily sound. Currently, its liabilities amount to $380,000,000,000, and its trust fund totals only $25,000,000,000. No self-respecting insurance company would be satisfied with anything approaching that ratio, and no insurance commission would think of sanctioning it. Furthermore, as has been pointed out, cash benefits to Social Security recipients are raised just as regularly as an election-eve rolls around. Thus, it is virtually certain either (1) that the whole Social Security System, sooner or later, will be declared bankrupt, or (2) that our children will have to subject themselves to a truly confiscatory tax rate in order to enable the government to continue making good on its promises.

Few sorts of services are more susceptible to endless expansion than is health care. We are told that an additional quarter per cent of Social Security tax would finance the Forand scheme

during its first year, and just to be agreeable, let's suppose that the estimate is correct. But what of the cost in later years? Every nation that has undertaken to provide health services at governmental expense has found utilization, and hence costs, immeasurably exceeding expectations. In England, we learn, there are waiting lists of up to 300 people for every hospital bed, other than those reserved for the direst emergencies, and patients must wait from two to three years for elective surgical procedures such as hernia repair, appendectomy and tonsillectomy. In two Canadian provinces, hospitalization costs amount to a quarter of the total budget.

ADEQUATE HEALTH CARE IS AVAILABLE TO EVERYONE

It's no secret that physicians throughout the country would prefer to have the federal government undertake *no* new program of this sort. Taxes are already so high that many people see no advantage in working full time and to the limit of their abilities, and venture capital is becoming so hard to find that needed expansions in our nation's productive capacity are having to be postponed. The national debt has become so great that even if we were to start reducing it immediately, we couldn't hope to pay it off during our lifetimes.

In a free nation such as ours, it is always best for the people to delegate as few tasks as possible to their government, for with every responsibility that they assign to government they give up a portion of their liberty.

The financial burden of health care for the aged can best be relieved by making health insurance available to those of them who are not already public charges. Of the 307,000 Iowans 65 years of age and older, (a) 45,000, it is estimated, have sufficient funds so as not to be interested in insurance; (b) 180,000 can afford to buy ordinary health insurance, and of these about 60,000 now have Blue Cross-Blue Shield in some form; (c) of the remaining 82,000, about 45,000 are eligible for indigent care; (d) of the 37,000 who are left, 7,900 have bought Blue Cross-Blue Shield special policies for the elderly, and an estimated 20,000 have Continental Casualty or Mutual of Omaha coverage. Thus, only 9,100 elderly Iowans in need of insurance remain to be provided for.

Other provisions for the care of the elderly are being made through "the voluntary way" here in Iowa. Just as in neighboring states (see the lead editorial in this issue of the JOURNAL), Iowa doctors and hospital administrators are planning to institute "progressive patient care" as a means of improving service and rendering it less expensive. Several communities are planning "homemaker services" through which old people can be helped with their housekeeping and some of their meal-preparation. Many new nursing homes and additions to existing nursing homes are under construction, and the standards for such institutions are being raised.

In the meantime, as long as there are people—elderly or not—who need medical attention for which they can't pay, doctors are perfectly willing to go on providing it free of charge or at reduced rates, just as they always have done. *Physicians aren't asking for government subsidies, and no one has ever been able to show an instance of a needy individual to whom a doctor of medicine refused indicated services.*

MEDICAL CARE AT FEDERAL EXPENSE REMAINS A LIVE ISSUE

Political realities this year seem to require that Congress continue considering proposals for the provision of health care to the aged at federal expense. Each of the major political parties feels compelled to provide or promise to provide it as a means of attracting votes, and everyone who advocates a different solution to the problem runs the danger of being thought flint-hearted.

Of the varied health bills that have been or are to be proposed, physicians will find the Eisenhower Administration's version least objectionable. Though as this is written, it has not yet been formally presented, it can be assumed that it will conform to the six principles enumerated recently to the House Ways and Means Committee by Mr. Arthur S. Flemming, secretary of Health, Education and Welfare:

(1) Health insurance should not be compulsory.

(2) No program should stifle private initiative in the health insurance field.

(3) The existing private system should be strengthened and stimulated.

(4) We should preserve and strengthen the private relationships which now characterize the rendering of health care services.

(5) All aged persons should have the opportunity to participate in any program that may be developed.

(6) "Major medical" insurance should be available to the aged.

SUMMARY

Physicians are no less concerned than are other people about seeing to it that the health needs of the impoverished aged are fully provided for. Indeed, they have been and are quite willing to continue providing them care with which no one has yet been able to find specific faults.

They consider the Forand Bill poorly designed, in that it would give help to an ill-assorted group, not all of whom are elderly and not all of whom are needy.

They think it would be especially unwise to attach medical benefits to the OASI program because the Social Security System already is underfinanced, and because the extension of such benefits to other groups of people would then be inevitable.

They remain convinced that private agencies and local governments should be given a little more time to work out local arrangements for the care of the aged.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

The end of one's term of office in any organization is something that she approaches with mixed emotions. She resembles the accountant balancing his books, as she counts up the projects accomplished and the many left unfinished.

Because of the experiences I have had—including bad weather and an automobile accident—I have been advocating that from now on we attempt to keep our president for two years. This would be entirely possible under our present constitution and is the practice followed by the majority of state organizations.

Actually, from the time she takes office at the end of the convention in April until the beginning of October, our new president can do very little organizational work because of changing officers and vacations. This leaves only five months before reports are due, and those are winter months when traveling is difficult if we are to judge by the last two years. It is my opinion that any president would be much more effective her second year than her first, and I certainly hope it will be possible for us to keep our new president, Mrs. Nielsen, for two years.

I have enjoyed the work this past year, and I believe most of the other officers and the board members feel the same. We think many of our members are missing some pleasant experiences and friendships that might be theirs if they would take a more active part in State Auxiliary work.

In going over your county reports, I was gratified to see the amount of community service that our members are giving. Good citizenship practiced by the wives of physicians will add luster to the mental image that the public has of medicine today!

Mrs. E. A. Larsen
Retiring President

AMEF Note Paper and Envelopes
$1.00 per pack of 10 each

Order from
Woman's Auxiliary
529-36th Street
Des Moines 12, Iowa

Proceeds will be donated to the American Medical Education Foundation

AMA AUXILIARY PLANS 37TH ANNUAL CONVENTION

A water-safety demonstration will be one of the highlights of the 37th annual convention of the Woman's Auxiliary to the AMA.

More than 2,000 physicians' wives will attend the meeting, which is being held in conjunction with the AMA's annual meeting, June 13-17, in Miami Beach. Auxiliary headquarters will be at the Hotel Deauville.

The convention will formally convene Monday morning, June 13, with reports of officers and chairmen, and election of the nominating committee. The opening will be preceded by committee meetings on Saturday and Sunday, June 11-12.

The annual tea and fashion show honoring the president, Mrs. Frank Gastineau, of Indianapolis, and the president-elect, Mrs. William Mackersie, of Detroit, will be held Monday afternoon. The water-safety program, under the auspices of the Dade County Chapter of the American Red Cross, will be conducted at the hotel pool on Tuesday afternoon.

Business sessions on Tuesday will be devoted to reports of national chairmen in the fields of legislation, civil defense, mental health and recruitment.

National past presidents of the Auxiliary will be honored at Tuesday's luncheon, and the guest speakers will be Dr. Louis M. Orr, and Dr. Vincent Askey, president and president-elect of the AMA. At that time, the Auxiliary will announce its contribution to the nation's medical schools through the American Medical Education Foundation. Awards of merit will be presented to the state and county Auxiliaries that have contributed most to this project.

Election and installation of new officers will be the principal order of business at Wednesday's sessions.

A program of films on recruitment, aging and other topics of current interest will be presented Thursday morning. In the afternoon, round-table discussions and program-planning sessions will be moderated by the new chairmen.

A full schedule of activities, ranging from dancing and ping pong to boat trips and tours, is being arranged for the teenage members of doctors' families by the Auxiliary.

All Auxiliary members, their guests and the guests of physicians attending the annual meeting

of the AMA may participate in the social functions and attend the general meeting of the Auxiliary in Miami Beach.

COUNTY AUXILIARIES

Black Hawk

Bruce Henderson, son of Dr. and Mrs. L. J. Henderson, of Cedar Falls, a junior in high school, has been selected by the American Field Services as an exchange student to go to Japan this summer. He will leave June 6 from Vancouver via Canadian Airlines, and will live with a family in Sasibo City, Japan. The host family includes five children, of whom the youngest is 16 years of age. He will return to the States by ship on August 7. Bruce's mother is the secretary of the State Auxiliary.

Clay

A group of 15 future nurses from Spencer High School recently visited the campus of the University of South Dakota, at Vermillion, for an orientation program in nurses' training. Mrs. D. H. King, the Future Nurses Club sponsor, accompanied the group. The girls spent two days on the campus, where they attended a chemistry class and an anatomy class, toured the Medical Service Building, viewed a film on nursing education, and heard two lectures and a student-nurse panel discussion.

Mahaska

If you were watching the popular TV program "The Price Is Right" during two of its April showings, you saw Mrs. Sidney Smith, "the housewife from Oskaloosa," win a mink coat, a houseboat-trailer combination and a trip to Europe for two. The vacation plans for Dr. Smith and his prizewinning wife appear to be well arranged.

The Mahaska County Medical Auxiliary will entertain its Future Nurses Club on the evening of May 7, honoring them as the first Iowa FNC to secure a national charter. Members of the Ottumwa Future Nurses Club will also be guests at this party.

Worth

The Worth County Medical Society entertained the members of its Auxiliary, recently, at a dinner held at the King's Wood Hotel, in Austin, Minnesota. Each group held its annual meeting afterward. Mrs. C. T. Bergen, of Northwood, was reelected president of the Auxiliary, Mrs. B. H. Osten, of Northwood, is vice-president, Mrs. M. P. Allison, of Northwood, is secretary-treasurer, and Mrs. Florence Westly, of Manly, continues as historian.

POLK'S CHRISTMAS CARD PROJECT WAS A GREAT SUCCESS

With the approval of the Polk County Medical Society, the members of its Auxiliary undertook the project of raising money for the Des Moines Health Center last December. A special Christmas card was fashioned for this purpose, and it was very beautiful in design. The signatures of the subscribers were reproduced on the inside of the card, and one was sent to each of the doctors in the Polk County Medical Society. Each subscriber had given $15, and the proceeds were used to purchase much needed equipment for the Health Center. This was stated on the card. The project fulfilled a twofold purpose in that it helped a community center and spared the doctors the task of mailing a considerable portion of their Christmas cards.

The total amount of money collected was $1,610.00, and the net was $1,332.51. The committee is happy to announce that $110.00 was given to AMEF. These are figures of which the Auxiliary can be most proud.

The committee consisted of Mrs. B. F. Kilgore, chairman, Mrs. Robert Updegraff, co-chairman, Mrs. D. C. Wirtz, Mrs. Robert Foss, Mrs. Everett George, Mrs. J. H. MacNamee, Mrs. R. M. Knox, Mrs. W. H. Myerly, Mrs. Donald Newland, Mrs. C. C. Woodburn, Mrs. C. W. Latchem and Mrs. Louis Goldberg.

"CANDY STRIPERS"

Some 150,000 teenagers are busy these days proving that adolescence is not necessarily a time of delinquency. They serve as volunteers in approximately 5,500 American hospitals. Sometimes called "junior aides," or "cartwheelers," they are usually called "candy stripers," and their duties range from counting linen to feeding patients.

In addition to providing assistance in hospitals, the teenage program serves as a teaching procedure, according to Mrs. Palmer Gaillard, Jr., of Mobile, Alabama, chairman of the American Hospital Association's Council on Hospital Auxiliaries and vice-president of the board of trustees of the Mobile Infirmary. It acts as a stimulant for recruitment into nursing and other health careers, and it helps teach future citizens the ideals and objectives of the medical and paramedical professions. "Out of teenage volunteers come adult volunteers and hospital board members," she said.

Teenage volunteers ideally are between the ages of 16 and 18, although those as young as 14 may serve under careful supervision. Both boys and

girls work at such jobs as arranging flowers, supervising children's play, typing, waiting tables, carrying messages, assisting in the library, preparing occupational and physical therapy material, reading to patients, sorting mail and acting as escorts. Many of the hospital programs are arranged through school faculty advisors and vocational counselors, placement directors of metropolitan volunteer bureaus, and leaders of scout troops, 4-H clubs and church groups.

The first two teenage volunteer programs were begun in the early 1940's in Evanston, Illinois, and East Orange, New Jersey. The term *candy striper* originated at Evanston Hospital, where the girls wore red-and-white striped pinafores. When a nurse, instead of a volunteer, delivered a tray to an elderly patient, the patient asked, "Where's my pretty little candy striper tonight?" Although the name has not been made official, it is the one most commonly used.

MEET YOUR MEMBERS

In eleven consecutive issues of the WOMAN'S AUXILIARY NEWS, you are to be introduced—or at least you are to learn more about—some of the Iowa Auxiliary's real assets. The organization is generously endowed with beautiful, talented women, and it won't be possible to present them all. For the purposes of the State Medical Society and its Auxiliary, Iowa has been divided into 11 districts, and thus it seems quite logical that one candidate be chosen from each of those districts.

You have heard dire warnings from many sources of the danger of the "Let George do it" attitude, or the apathy which is prevalent today. Inevitably, where a vacuum of irresponsibility exists, someone who is willing to carry the load moves in. This danger lurks in the leadership of any organization, and the Auxiliary is no exception.

Do you know your new president?

Is she a dictator?

Were you responsible for her election?

It will not alleviate any of your fears or suspicions about her when you learn that this very first effort of hers will demonstrate her dictatorial tactics. As your elected leader or dictator, she proposes to brief you on one of your fellow members each month—to conduct a sort of "know-your-Auxiliary-members" column, but with an odd, undemocratic twist.

There will be no election, no meetings of a committee, no consideration of feelings, no screening of district queens. There will be just an arbitrary choice of candidates by this newly-inaugurated president. Such tactics would never survive a Senate investigation!

Frankly, there wasn't time for democratic elections. Consequently, your "dictator" just arbitrarily chose one member from each district. Granted that fair elections might provide equal talent, but they couldn't furnish better selections.

MRS. R. F. NIELSEN
President-elect

IT'S UP TO YOU

Forand-type issues are far from dead!

The demand for federal doles and resulting *controls* comes from the uninformed, the greedy and the lazy. Is this the American way?

If you believe that it is not, then there is much work to be done by all of us.

As we recall the Ten Commandments that were reimpressed upon us during the Lenten season, let us remember that there are also some commandments for citizens.

COMMANDMENTS FOR VOTERS

I. *Keep informed.* Read newspapers and magazines; listen to speeches, discussions and debates; then form your own opinions.

II. *Study candidates.* Look up their past records. See what they stand for, and whether they have lived up to their promises. Make a working legislative scrapbook for yourself and your Auxiliary.

III. *Participate!* Attend precinct caucuses and political meetings. Make your voice heard in the selection of candidates and in the formulation of policy.

IV. *Offer your services.* Choose for yourself an essential pre-election job involving real "legwork."

V. *Encourage men and women with character and competence to dedicate themselves to careers in public service.* Government will never be any better than the people who are in it.

VI. *Always express your preference.* Even if your choice is limited to candidates whom you regard as less than ideal, you should choose the best of the men offered.

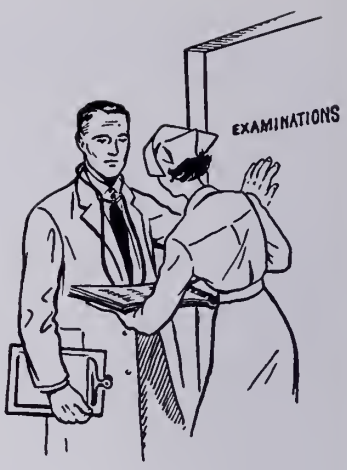
VII. *Stimulate others to vote,* within the limits prescribed by your state laws. Explain where and when to register and vote.

VIII. *Consider it your moral obligation to vote.* If we don't use this most precious privilege, we are likely to lose it!

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. E. A. Larsen, 323 Oak Street, Centerville
President-Elect—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. H. C. Merillat, 116 Lincoln Place Drive, Des Moines 12

THE DOCTOR'S BUSINESS



Joint Ownership of Property

HOWARD D. BAKER

WATERLOO

Joint ownership of property, with assurance of survivorship rights, had its origin in a past era much less complex than the present. Generally, it was a means by which a small amount of property could be transferred to a widow with a minimum of cost and inconvenience. For average professional men today, however, the advantages of such ownership are overshadowed by a great number of disadvantages. Only from habit or from a failure to consult their legal advisors, do they continue to acquire property in joint ownership.

In addition to the advantage just mentioned, joint ownership is desirable because it permits property to pass by law to the survivor without some of the usual probate and administrative costs, and because it gives the survivor almost immediate access to the property. Thus, joint ownership may be desirable for certain classes of property. But in medium to large estates, only a very limited use of it can be justified.

One of the disadvantages of joint ownership is that a gift-tax problem may be involved. Generally speaking, a gift occurs, for tax purposes, when a person purchases property with his own funds and then places title to it in joint ownership with survivorship rights. The subject is too complex for adequate treatment here, but one certainly should consult his lawyer before taking such action. The fact that a man was unaware of making such a gift, or had no such intention, is immaterial. Some exceptions to this gift rule are accumulations of cash and U. S. bonds. Placing either of these in joint ownership does not in itself constitute the making of a gift. A gift occurs only when such cash or bonds are converted to the donee's personal use.

Jointly owned property with survivorship rights also presents serious estate-tax problems. Broadly speaking, such property is taxed in the estate of the first spouse to die in the same proportion as that person contributed to its cost. However, it is *assumed* that the first spouse to die contributed the entire cost, and the burden of proving that all or part of the cost was contributed by the surviving owner rests upon the estate. It is further necessary for the estate to prove that no part of the cost that the survivor contributed came from funds that were originally owned by the decedent.

Since all joint property with right of survivorship passes outright to the survivor, the use of such an arrangement often prevents the utilization of the marital deduction on the most favorable basis. For example, if all of a husband's estate is jointly owned, more property will pass to the wife than will be deductible as a marital deduction in the husband's estate. In such a case, joint ownership will be responsible for an unnecessarily high and burdensome tax at the subsequent death of the widow.

The problems of estate taxes, marital deductions and control over the ultimate disposition of the property will all make their appearance when joint ownership with right of survivorship has been used without a full investigation of the advantages and disadvantages of that form of title.

Although joint ownership with survivorship rights is fully justified under proper circumstances, its extensive use will create costly problems. Such ownership should never be employed except on the advice of an attorney experienced in estate planning.

This is the first in a series of discussions dealing with estates, insurance, investments and tax problems. Subsequent articles will emphasize the need for your giving careful study to each of your financial affairs outside your medical practice. For the present, however, it might be well worth your while to review this matter of joint ownership as it affects your particular situation.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Medicine's Finest Hour

LEONARD W. LARSON, M.D.

BISMARCK, NORTH DAKOTA

THE NEXT FEW YEARS will ultimately show whether this year was medicine's finest hour . . . or its lowest moment. We are faced with many challenges today that will result in posterity's judgment of present-day American medicine.

The challenges which confront us both as physicians and citizens demand *closer* attention and *greater* effort than we ever before have been called upon to give.

We are entering a critical decade which will present us with many international decisions and crises—a decade which probably will tell the story on whether mankind survives or all but destroys itself.

On the scientific front this new decade will be bringing dramatic, revolutionary knowledge in medicine. As we learn more and more about the causes and treatment of cancer, cardiovascular diseases, mental illness, congenital defects and other unsolved health problems, we gradually shall be altering the factual basis for some of the present socio-economic issues.

For example, the so-called "problem" of aging and health care of the aged has been produced by the advances in medicine, public health and standards of living. It is quite possible that those same forces might alter the problem radically in the years and decades immediately ahead. It is conceivable that we might eventually arrive at an era when the vast majority of old people would be active and healthy until the very end.

This progress is a matter for pride, but not for complacency. We must avoid the smug contentment that we live in the best of all possible societies which now has all the answers.

We must be constantly alert to any faults or deficiencies that may exist. We must try harder to anticipate needs and problems—before they can be used as pawns in the popular game of political chess.

Unfortunately, some people—including quite a few politicians—seize upon a deficiency or a need, exaggerate and distort it out of all proportion to its real magnitude, and then demand legislation as the only possible answer to the problem. Sometimes, their *objectives* are worthy and humanitarian, but the *means* which they advocate are questionable or even dangerous.

There is no more timely example of this than the subject of aging and health care for the aged. Of all the many and varied challenges facing medicine, this is the largest and the most *immediate*.

The question of aging and health care for the aged has countless aspects—medical, social, economic and political.

However, within the broad outlines of this picture, medicine's most urgent task is to mobilize strong resistance to current legislation now being considered by Congress, which would provide hospital, surgical and nursing home benefits to social security beneficiaries.

From all standpoints—medical, social and economic—we believe that such a non-voluntary type of legislation offers a completely unsound answer to the health needs of the aged. It would not meet the need where it mainly exists—among the indigent and near-indigent—and it would destroy progress where it is being made . . . in the field of voluntary health insurance coverage for persons over 65.

Furthermore, we fear strongly that any such legislation would be only the precedent—the opening wedge—for insidious development of a tax-paid health care system for the entire population. Once the principle of *service* benefits is established under the Social Security program, there will be never-ending political pressure to increase the benefits and expand the number of people covered.

President Eisenhower has indicated that he believes Congress should delay action on bills involving health care for the aged until after the White House Conference on Aging, which will be held next January. Incidentally, the American Medical Association strongly supported the legislation calling for that conference, and we are cooperating actively in national and state preparations for it.

Nevertheless, we must bear in mind that this is a presidential election year—one in which both political parties will be seeking all possible ways to gain favor with every conceivable group of voters.

The Senate Subcommittee on Problems of Aging and the Aged—the so-called McNamara committee—has recommended increased federal aid to provide health and other benefits to the aged. The AFL-CIO has urged all of its members to engage in an intensive letter-writing campaign in favor of the Forand bill. Senator Kennedy has introduced an even broader bill, and undoubtedly there will be many more proposals and amendments to proposals.

In short, we are facing our most critical situation since 1949.

Dr. Larson is chairman of the AMA Board of Trustees, and he made this address at the annual meeting of the Iowa State Medical Society, in Des Moines on April 27, 1960.

However, as I implied earlier, simply to oppose —to take the negative approach—is not enough. We must offer better alternatives, constructive ideas, and both medical and *community* leadership.

We must help solve any problems or needs which do exist among our aged population. If we fail to make this positive effort, then we cannot complain if the politicians finally take over the matter.

The American Medical Association has developed an expanding, intensified program aimed at all facets of the aging process—physical, mental, emotional, social, occupational, cultural and economic. As just one part of that program, we have sponsored a national planning conference and a series of regional conferences to stimulate both medical and public interest in the subject.

On the legislative front—in addition to the bill setting up the White House Conference on Aging —we gave strong support to the legislation passed last year to provide FHA mortgage guarantees to stimulate the construction of proprietary nursing homes. We are also urging that the Hill-Burton Hospital Construction Act be amended to give the states greater flexibility in meeting the need for more nursing homes and chronic illness facilities. And we have recommended that the four existing Public Assistance medical programs be combined into a single program for greater economy and efficiency.

On the insurance front, the AMA House of Delegates took an important step a year ago last December. At that time it adopted a proposal urging all physicians to adjust their fees in a way which would stimulate the faster development of health insurance and prepayment plans for persons over 65 with limited resources or low family income.

During the past year both the Blue Shield plans and the private insurance companies have been making rapid progress in this area.

In 1958, about 43 per cent of our population over 65 already had some kind of voluntary health insurance protection. With all the interest and activity now centering on this field, it is a conservative estimate that at least 60 per cent of the older people who need it and want it will have coverage by the end of this year—and it will be better, more effective coverage than ever before.

This progress would certainly be undermined by federal encroachment in the health insurance field.

In short—and I have given just a few highlights of the over-all program—medicine is trying to provide leadership for a constructive, voluntary effort in the field of aging.

I have dwelt here today on the immediate and long-range aspects of the challenge presented by our aging population. Actually, of course, it is only one of the many difficult issues which medicine will be facing in this new decade.

All of them—if we are to be effective and successful—will require medical unity. The time has passed when we can think, act and speak as a myriad of splinter groups—as general practitioners, specialists, solo or group practitioners, medical teachers, researchers, public health men, or any other category you may think of.

The medical profession—demonstrating a real dedication to the best ethics and traditions of medicine—must organize a united front.

We must build a public image of the physician and the profession as men and women who are interested in the welfare of their patients and the public at large.

This public image, however, will mean nothing if it is simply based on publicity gimmicks or the slickness of the Madison Avenue technique.

I honestly believe that we have demonstrated our concern and our willingness to meet the greatest challenge in medicine's history. Although we must wait for history's slow progress, I believe that already we have risen to greatness, and I also believe that we shall continue to meet the challenges.

Yes, I believe this will be considered by future generations as medicine's finest hour.

SOCIETY OF NUCLEAR MEDICINE

The Seventh Annual Meeting of the Society of Nuclear Medicine will be held at the Stanley Hotel, Estes Park, Colorado, June 22-25, 1960. Over 70 speakers will present new scientific information covering every phase of research, medicine and surgery as it concerns the use of nuclear phenomena in the diagnosis and treatment of disease. Special emphasis will be given to the diagnosis and treatment of thyroid disease, therapeutic use of radioisotopes and "tools of the trade."

The first annual address of the Nuclear Pioneers Series will be delivered by Dr. Edward Teller, of the University of California. It will be in honor of the late Dr. Ernest O. Lawrence.

The meeting is open to all physicians, veterinarians, nurses, physicists, technicians and other scientists working with, or interested in utilizing, radioisotopes in the health field. There is a nonmember registration fee of $5. Registration forms and copies of the program can be secured from Mr. Samuel N. Turiel, administrator of the Society, 430 North Michigan Avenue, Chicago 11.

Attend the Annual Meeting of the

AMERICAN MEDICAL ASSOCIATION

Miami Beach, June 13-17, 1960

Scientific Articles

The Surgical Treatment of Pseudocyst Of the Pancreas

WILLIAM L. YETTER, M.D., AND EDGAR S. BRINTNALL, M.D.

IOWA CITY

ALTHOUGH CYSTS of the pancreas may be of developmental, neoplastic, parasitic or retention types, the surgeon must often deal with pseudocysts of inflammatory or traumatic origins.

Nine patients with pancreatic pseudocysts of inflammatory origin were treated surgically at the Veterans Administration Hospital in Iowa City during the five-year period 1953-1958. Treatment consisted of internal drainage into the stomach (cystogastrostomy) in six cases; external (extraperitoneal) drainage in one case; and marsupialization in two cases. Internal drainage by cystogastrostomy seems to be a simple and safe treatment which is applicable to most pseudocysts and which yields satisfactory results.

CLINICAL OBSERVATIONS

The nine patients with pancreatic pseudocysts were all males, and their ages ranged from 32 to 64 years. They presented symptoms of two months' to 13 years' duration, relating to preceding pancreatitis or to the pseudocyst itself. Epigastric pain was the most common symptom, and it was characteristically periodic in nature. Seven of the patients gave histories of moderate to severe alcoholism. One patient took only an occasional drink of an alcoholic beverage, and the other patient was a total abstainer. Three patients had gallbladder disease. One of these had undergone cholecystectomy prior to the development of pseudocyst. In two patients, cholecystectomy was performed at the time of surgery for pancreatic pseudocyst. No patient was found to have common duct stone or evidence of primary disease of the common bile duct or ampulla of Vater at the time of operation for the pseudocyst. Two patients gave histories of transient jaundice, but none had been jaundiced at the time of his initial examination. Two of the patients had diabetes mellitus that had been diagnosed nine months and five years prior to the development of pseudocyst. In neither of these two patients did cyst drainage affect the severity of the diabetes. In none of the patients had the preceding pancreatitis resulted from abdominal trauma or followed an abdominal operation.

In seven of the nine patients, an epigastric mass was palpable, and in these same seven patients there were gastrointestinal roentgenographic findings of a widened duodenal loop or an anterior displacement of the stomach, or both (Figures 1 and 2). In the two patients in whom the cyst was not palpable, roentgenograms revealed no abnormalities, other than pancreatic calcification in one patient. The indications for surgery in these two patients without palpable cysts were severe upper gastrointestinal tract bleeding in one, and a history suggesting relapsing pancreatitis in the other. Serum amylase determinations were of no value in the diagnosis in the nine patients. The levels were within normal limits by the time the pseudocysts became apparent.

SURGICAL TREATMENT

The nine pseudocysts in this series were treated by drainage, as follows:

Cyst marsupialization	2
External (extraperitoneal) drainage	1
Pancreaticocystogastrostomy	6

The authors are staff members of the Surgical Service at the Veterans Administration Hospital in Iowa City.



Figure 1. (H.M.M., X-23279) Roentgenographic demonstration of gastric displacement by pancreatic pseudocyst. The stomach is seen to be displaced superiorly (antero-posterior film), and anteriorly (lateral film).

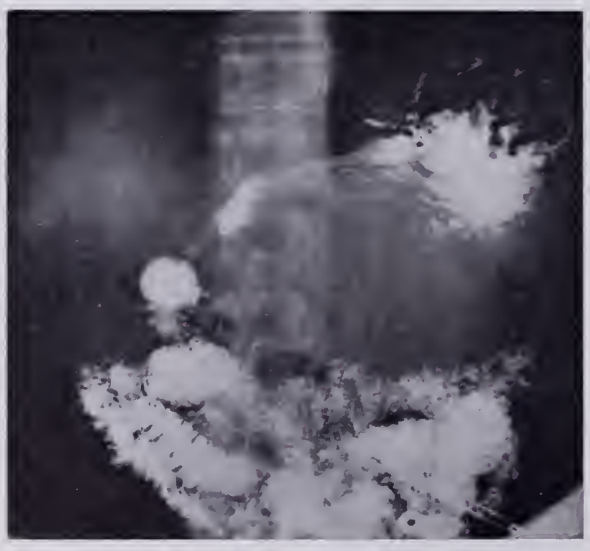


Figure 2. (W.S.B., X-12469) This roentgenogram reveals both superior displacement of the stomach and widening of the duodenal loop by pancreatic pseudocyst.

In one of the two patients treated by marsupialization of the pseudocyst, an asymptomatic fistula developed between the cyst and the jejunum several weeks after operation. The fistula was demonstrated during a routine postoperative upper gastrointestinal barium study. Following formation of this internal fistula, external drainage diminished. The internal fistula may have hastened healing of the external drainage tract. External drainage ceased three months following the operation. The second patient treated by cyst marsupialization had bouts of diarrhea postoperatively, but they gradually subsided. The external fistula closed in four months.

One patient with a huge pseudocyst extending to the left flank was treated by simple drainage extraperitoneally through the left flank with a large rubber drainage tube. This seemed to be the safest method of drainage in that particular situation. Drainage was still present eight months later when the patient was last examined. At that time, the fistulous tract had a capacity of 30 cc. of fluid.

In five of the six patients treated by cystogastrostomy, the approach to the cyst was through an anterior gastrotomy incision.[1] An opening was then made through the adherent posterior gastric

and cyst walls (Figure 3). Cyst wall and posterior gastric wall were then sutured together with absorbable sutures. In the sixth cystogastrostomy patient, the entire pancreas was cystic due to dilatation of the main pancreatic duct. This cyst had resulted from an obstruction of the pancreatic duct at the papilla of Vater, and therefore could be classified as a retention cyst rather than as a pseudocyst. However, typical pseudocysts may be associated with ductal obstruction, and this particular cyst presented the problem of appropriate drainage, as does a pseudocyst. A small portion of the tail of the pancreas was resected, and the stump was anastomosed to the posterior wall of the stomach in an end-to-side fashion. Six months later, a transduodenal sphincterotomy was done because of recurrent attacks of jaundice. Complete recovery occurred, and the patient has been asymptomatic for two years.

The first pancreatic pseudocyst in this series was treated in 1953, and the last two during the spring of 1958. The results in all are considered to be satisfactory. However, several complications deserve consideration. The spontaneous internal fistula between cyst and jejunum which formed following cyst marsupialization in one patient seemed to be beneficial, probably shortening the period of external drainage which is so often of long duration and highly annoying to patients treated by external drainage or marsupialization. The postoperative diarrhea in the second patient with marsupialization of a pseudocyst may have been due to temporary deficiency of pancreatic enzymes. The persistent drainage in the one patient who was treated by simple drainage with a rubber tube constitutes a nuisance which eventually may justify further surgical intervention such as anastomosing the draining tract to the stomach or jejunum, or a further search for evidence of ductal obstruction. One of the patients treated by cystogastrostomy developed recurrent jaundice, epigastric pain and fever, and these led to sphincterotomy for relief of ampullary obstruction six months after cyst drainage. It was of interest that there was no evidence of cyst, and little evidence of pancreatitis at the time of sphincterotomy. The patient has remained in good health since that time. In another case of cystogastrostomy, poor gastric emptying, with vomiting, persisted for three weeks following surgery, but the patient has been well since.

In the six patients with drainage of cyst to the stomach, no complications resulted from the entry of gastric contents into the cysts. Stomach-to-cyst reflux of barium was demonstrated roentgenographically in one of the patients, but there were no symptoms related to this phenomenon.

Cyst-wall biopsies were taken routinely to confirm the operative diagnosis of non-neoplastic pseudocyst. The biliary tract was carefully examined for abnormalities at the time of the operation, and in two patients operative cholangiography was performed. The cholangiograms were normal. Cyst visualization with radiopaque material was not done. It is suggested that such visualizations might give valuable information concerning the relationship of the cyst to the pancreatic duct, and information about the pancreatic duct itself, e.g., dilatation or obstruction.

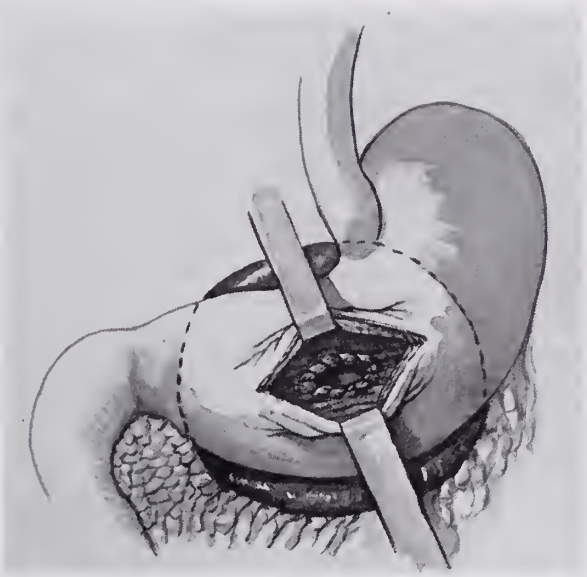


Figure 3. Diagrammatic illustration of the transgastric approach to pancreaticocystogastrostomy.

DISCUSSION

A consideration of the possible causes of pancreatitis is not within the scope of this study. However, the pseudocysts of the pancreas in this series all followed pancreatitis of the acute or recurrent type. As pancreatitis may be associated with biliary tract disease, it is important to evaluate the biliary system carefully at the time of the abdominal exploration. Diseased gallbladders should be removed. If the common bile duct is suspect, it should be explored or visualized roentgenographically, so that a stone or an ampullary obstruction will not be overlooked.

Few surgeons accumulate an extensive experience in the treatment of pancreatic cyst, for these lesions are relatively rare. The method of treatment selected should be based upon the operative findings regarding the size and location of the cyst, the severity of the inflammatory reaction, and the site and degree of adherence of the cyst to adjacent structures. Furthermore, one should be certain that the cyst is not neoplastic before abandoning resection in favor of a drainage procedure.

The procedures applicable to the treatment of pancreatic cysts include excisions, resections, and external and internal drainages. We have not had

experience with sphincterotomy for pancreatic pseudocyst as recommended by Doubilet and Mulholland.[2]

As pseudocysts usually form on an inflammatory basis in association with pancreatitis, simple excision by enucleation is rarely appropriate. In contrast to pseudocysts, retention cysts often may be simply enucleated, since pancreatic and pericystic inflammation is often lacking. Occasionally, small cysts of the tail of the pancreas may be removed by resecting the tail of the pancreas and the spleen. The combined resection of the tail of the pancreas and the spleen has been indicated in occasional cases of splenic-vein thrombosis with splenomegaly and laboratory evidence of hypersplenism, secondary to pancreatitis. We have not seen this situation with pseudocyst, however.

Resection of the head of the pancreas and duodenum is so technically difficult and hazardous in the presence of inflammation that it is seldom justified in the treatment of pseudocysts. An exception to the principle of avoiding head-of-pancreas resection for inflammatory disease was made by one of us (E. S. B.) in a case of head-of-pancreas abscess (V.E. No. 9672) which eroded the common bile duct and the pancreaticoduodenal artery. Recurrent, nearly fatal bleeding through the common bile duct was controlled by pancreaticoduodenal resection, though that procedure was technically difficult because of pancreatic and peripancreatic inflammation. Fortunately, the patient survived the hazards of hemorrhage and of a technically difficult pancreatic resection, and has remained well to the present time, five years following the operation. Hemorrhage did not occur as a complication of pseudocyst in this group of patients.

The external drainage of pseudocysts by simple drainage or marsupialization is accomplished easily from a technical standpoint, and often the results are satisfactory in every way. However, drainage may persist for months or years, skin irritation may be distressing, and the cyst may become infected. This treatment seems best suited to those pseudocysts which are so located that internal drainage cannot easily or safely be accomplished.

Two methods of internal drainage of pseudocysts are in vogue at the present time—namely, cystogastrostomy and Roux-en-Y cystojejunostomy. Most pseudocysts are adherent to the posterior wall of the stomach in an area which is suitable for drainage. The anastomosis of the cyst to the posterior gastric wall by a transgastric approach can be simply and rapidly accomplished, and it is secure because of the inflammatory adherence of the cyst to the stomach. The simplicity and safety of cystogastrostomy, and our satisfaction with the results of this procedure, have made us reluctant to drain pseudocysts to a long-limb Roux-en-Y of jejunum, although this latter method of drainage has been found satisfactory by others[5] and offers the theoretical advantage of peristaltic opposition to reflux of intestinal contents into the cyst. Since we have not yet encountered complications arising from the reflux of gastric contents into cyst cavities following cystogastrostomy, we prefer this simple internal drainage procedure.

SUMMARY

Nine pseudocysts of the pancreas were treated surgically without deaths or serious complications. External drainage was accomplished in three patients (marsupialization in two, and simple drainage in the other). In six patients, internal drainage was instituted by cystogastrostomy.

Internal drainage of pancreatic pseudocysts is preferable when the circumstances are appropriate, for it avoids the disadvantages of prolonged external drainage. Cystogastrostomy is a simple, safe and satisfactory method of internal drainage. No complications due to reflux of gastric contents into cyst cavities have been observed.

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FILM FOR COUNTY MEDICAL SOCIETIES AND HOSPITAL STAFFS

A 16 mm., black-and-white movie showing detection technics for cancer is being offered by Eli Lilly and Company for viewing by qualified professional groups. Entitled "The Cancer Detection Examination," the 46 min. sound film demonstrates pre-symptomatic detection of cancer through a simple 30-40 min. procedure in the doctor's office.

Emerson Day, M.D., director of the Strang Clinic, Memorial Center for Cancer and Allied Diseases, New York City, demonstrates detection procedures which are basically those used at the clinic in approximately 25,000 examinations each year.

Viewers of the movie will receive copies of a handbook containing the complete examination procedure. It includes some detailed closeup views which will serve the physicians for ready reference. Personal examination-history forms will also be supplied.

Lilly detail men can furnish information about borrowing the film.

Suggested Therapy for Malignancy Of the Breast

B. RAYMOND WESTON, M.D.

MASON CITY

IT WAS ORIGINALLY my intention to present statistics summarizing the experience of my group, Surgical Associates, Mason City, in the treatment of carcinoma of the breast. However, when I had checked the literature rather completely, for purposes of comparison, and had reread our correspondence with other surgeons on this topic, I was impressed by the fact that individual articles can be very confusing to those whose reading has been limited. On the other hand, a complete review left me with a pretty clear-cut program for the treatment of this condition, and I therefore decided to present, instead, an outline of the therapy that is generally accepted as sound by the surgical profession, as of the present moment. Justification of the program will also be offered.

A CLEAR CUT PROGRAM

There are six parts of this program:

1. All tumors of the breast should be treated surgically at once. Any doubt in an individual case as to the necessity should be resolved in favor of surgery.

2. A frozen section examination should be followed by some modification of the Halsted radical breast operation, unless (a) palliative surgery is to be performed for comfort and cleanliness in hopelessly incurable cases, or (b) other pathology is present and is of greater importance at the moment.

3. Postoperative x-ray treatment should be administered to all cases through Grades 3, and 4 with metastases, and Grade 4 without metastases. Recurrences should be treated by x-ray if indicated.

4. Hormone therapy should be used in the evidently resistant cases—estrogen at 50 years of age, and androgen before 50 years of age. One shouldn't be arbitrary in prescribing estrogen rather than androgen, or vice versa. Rather, a clinical trial must be used in determining the appropriate hormone.

5. Surgical oophorectomy, bilateral, is advisable in patients under 50 whose cases are clearly incurable. Questions associated with sterility must be settled aside from the purely therapeutic considerations.

6. Adrenalectomy and/or hypophysectomy can be undertaken in those cases where pain is severe, where the bone involvement is marked or where for some reason, good or bad, the family and patient wish life to continue a little longer at any cost.

The next item is purely my personal opinion. Resection of an apparently solitary metastasis in the lung, an off-shoot from a distant tumor, is recognized as good treatment. Yet we fail to resect isolated breast malignancy recurrences in the axilla, in the supraclavicular spaces and in the ribs. Such resections are commonly discouraging, but in my experience relief of pain and discomfort, plus occasional apparent cures, can justify them.

EARLY TREATMENT IS IMPORTANT

To justify every step of this program would be impractical and uninteresting, but I shall defend some of the more important ones. First, though many surgeons continue to claim that there is no virtue in early treatment, this idea is dangerous, particularly for those who are not too well informed. The overwhelming fact is that all cases of carcinoma of the breast die from the pathology, unless intercurrent disease causes their death. An appreciable number of patients are cured by various types of treatment, and statistics clearly show that the earlier treatment is started, the longer the patient lives. Survival rates for patients in whom treatment was instituted one month after the discovery of the lesion are superior to those in whom treatment was begun two months, three months, six months or a year later. The percentage of cures among patients treated before metastasis occurred is fantastically better than the percentage among those who were first treated after metastasis had taken place. Though it has yet to be discovered, there is a definite time for the first metastatic break-off. The earlier the treatment, the better the chance that it has preceded the first metastasis from the primary lesion. From the practical standpoint, it takes a terrific effort and a considerable distortion of statistics and logic to cast doubt upon the principle that early treatment is one of the most important controllable factors.

The question of whether frozen section should be primary or delayed is small but basic. The primary reason for delayed pathologic studies is that some hospitals where this type of surgery is performed aren't equipped for the preparation of frozen sections. Statistics relating to this point are quite adequate, and it is surprising how small a

contribution immediate pathologic diagnosis seems to make to increased curability. There is, however, a definite percentage of patients whose lives are sacrificed as a result of delay in the performance of this examination.

THE QUESTION OF SIMPLE OR RADICAL SURGERY

Our statistics show us that there is little that can be gained by going beyond the original Halsted operation. Extensive skin resection, with resultant skin graft, undoubtedly saves a few lives, but is statistically unimportant. Wangensteen's proposal for the resection of the internal mammary chain has yet to be proved statistically. In the time that has elapsed since the procedure was proposed by Dr. Wangensteen, there has been sufficient time for many competent men to make their own decisions as to its value. Objections which seem well justified, even if not proved, are as follows. The markedly increased time and trauma necessary to the procedure very probably increase the spread from positive glands. These nodes usually show a very high biological activity and indicate a very poor prognosis. It is believed that the Halsted procedure is much less culpable in this way. In view of the practically nonexistent mortality from the Halsted operation, the three per cent mortality from the Wangensteen technic seems a very important item.

The question of simple or radical operation, in my opinion, can be definitely settled by comparing the results achieved by Harrington and his associates with those secured by McWhirter and his coworkers. A great deal has been written to negate the conclusion that apparently is to be drawn from this comparison, but the following facts are incontrovertible. McWhirter and his associates report 48.1 per cent five-year survivals following simple mastectomy and irradiation, and Harrington and his colleagues report 59.3 per cent five-year survivals following radical mastectomy, with or without irradiation. Both of these series contained over a thousand cases. The obvious fact is that out of every 100 cases in Harrington's series, 11.2 of the patients who were alive after five years would have been dead if they had been in McWhirter's series. There are times, we think, for doing simple mastectomies, but not when the primary consideration is the achieving of a cure.

Recently, I read an article analyzing the cases from all of the hospitals in a certain city over a period of time. It included about 400 cases. The authors concluded that they could not determine any advantage for any of the methods—radical operation, simple mastectomy or local resection. This conclusion is typical of a very common attitude—that complete detachment which is essential to sound scientific reasoning. A simple mastectomy cannot cure cases with axillary metastases, but such cases *are* cured in a certain proportion of instances. Therefore, the radical operation *must* cure in greater numbers of cases. Even in scientific medicine, there is still a place for everyday common sense!

A great deal is written on the question of treatment of bilateral breast cancer. In some series, 9 to 12 per cent of patients are reported to have had primary or metastatic lesions in the other breast, but the bulk of material available fails to justify those figures. The great majority of surgeons deny the value or justification of removing the other breast, unless there is demonstrable pathology there. They have the same attitude toward resection of axillary vein or extensive resection of the rectus abdominal fascia and high cervical nodes.

As for the duration of the operation, there apparently is a maximum amount of detail beyond which there is no virtue. Operators vary terrifically in what they can do in a given length of time, but figures from several sources show that there is nothing to be gained by prolonging an operation beyond two hours.

RADIATION AND HORMONE THERAPY

Statistics on x-ray treatment vary markedly. In our own cases, we agree on the ones that should have x-ray, but can prove nothing by our figures. I think we can safely say, however, that the following is a fair representation of the majority opinion on the subject at the present time: Extensive preoperative x-ray has increased the five-year cures, but the advantage thus provided is lost because of two things: (1) postoperative healing is seriously interfered with, and (2) pathology is so disturbed that the presence or absence of malignancy cannot be established in many cases.

X-ray associated with simple mastectomy as a substitute for radical mastectomy is statistically unsound. Postoperative x-ray shows very confusing figures at times. Many statistics show fewer five-year cures with postoperative radiation than without it. This, to me, can mean only that the cases given postoperative radiation were more advanced than those that did not receive it. The majority of studies have shown advantages in treating Grade 3 and Grade 4 with metastases. A small but very definite increase in five-year cures among these patients is attributable to radiation. This is also true of any Grade 2 malignancy to a lesser extent. The roentgenologists still disagree on the best doses and technic, but we must accept the mass figures independent of these factors. There is no virtue in radiation of Grade I cases.

Hormone treatment in incurable cancer of the breast has a great deal of value in a certain percentage of cases, both surgical and non-surgical. A combination of roentgen and hormone therapy apparently is in no case superior to either of the

other two hormonal methods previously mentioned.

As far as the use of estrogens and androgens is concerned, the value can be determined in individual cases by the trial and error method. This, basically, is the general rule in such cases: Androgens work best in the pre-climacteric cases, or roughly in women under 50 years of age. Estrogen is preferable in those who have passed that age. About 50 per cent of patients will be benefited for varying lengths of time, in some instances only a few months but often a year or two. The good effects lasted 14 years in one case of ours. The difficult thing to understand is why in certain cases the estrogen works better early, and the androgen works better late in life. These cases, however, are quite exceptional.

What can be accomplished by hormonal surgery under certain circumstances is becoming clearer. The real issue to be determined in the individual case is whether the patient will really be better off, even if the surgical results are good. Let's be sure not to allow a fascination with the technic to override our honest judgment based on the social, financial and family situation of the patient involved. Surgical judgment cannot be divorced from a sound philosophical approach.

OOPHORECTOMY, ADRENALECTOMY AND HYPOPHYSECTOMY

In surgery, we have three procedures to consider: the oophorectomy, the adrenalectomy and the hypophysectomy.

The oophorectomy is not a new operation for carcinoma of the breast. It was first done in 1890, there was a revival of it in 1910, and then there wasn't a great deal of interest shown in it until the 1940's. It is now used routinely in the proper age group, but only occasionally or not at all in other patients. Its real value depends entirely, it seems, on how much cortical hyperplasia is present in the ovary. This has been well demonstrated in one long series of cases. The cases of castration showing marked hyperplasia of the ovary survived an average of 41 months after the operation. The cases where the ovary was atrophic survived an average of only 23 months. In stromal hyperplasias, 56 per cent of the total survival time from diagnosis until death was postoperative, but in the atrophic ovary cases it was only 28 per cent.

Before deciding on this operation, either for individual cases or as a routine procedure, one should consider certain things. First, half of these people are cured and therefore cannot be helped by oophorectomy. Second, a careful appraisal of the family situation, present or hoped for, must be undertaken. It will confer no benefit whatever on those without metastases and in whom the original tumor has been removed completely. If the decision is to be made purely on how long the patient's life can be continued, there isn't any doubt that approximately half of those who have castration within the period in which it was indicated will live longer than those who do not have it. In short, then, castration in carcinoma of the breast has definite value if properly used in the right cases. Routine oophorectomy hardly seems justified when it means precipitating a climacteric in over half of the women who would have survived without it.

Adrenalectomy becomes even more difficult to evaluate, largely because of unknown factors. As a general thing, adrenalectomy is most likely to show definite advantages postoperatively in those cases that have shown definite advantages from oophorectomy or from medical adrenalectomy. Extensive, painful metastases and bony metastases are also quite definite indications for adrenalectomy, if the patient chooses it after being told what the situation is all about. Very definite improvement for periods ranging from a few months to a year will take place in a certain number of cases. The percentages have varied terrifically in the series of cases that have been reported. In some instances, good results have been obtained up to two years, but these are exceptional, and when their periods of remission are over, these people go downhill very rapidly and die, frequently in a convulsive state.

Hypophysectomy is being used to replace adrenalectomy in some places, and in others it is being employed to permit increased recovery time after adrenalectomy. As nearly as we can determine, hypophysectomy and adrenalectomy are interchangeable. Why hypophysectomy is preferred in many places, in spite of fewer and possibly shorter relapses, we do not know.

Adrenalectomy and/or hypophysectomy can give additional time in a fair number of cases that already have been helped by oophorectomy. Aside from this, one or both operations can be used to relieve pain in cases of severe bone metastases. In any event, it is a shotgun method that occasionally produces an improvement. It can't be depended upon, but is sometimes desperately desired by the patient or her family.

By far the greatest overall benefit from surgery will come from properly chosen oophorectomy.

OUR OWN STATISTICS

We present our own statistics only as one set out of many that demonstrate the efficacy of the treatment that I have outlined. They also show the value of early surgery very clearly. These cases cover the years between 1943 and 1953, and include only those cases completely followed by questionnaire but still are over 90 per cent of our procedures. A total of 111 cases were followed in this series.

We live in a community where the intelligence

and the medical care are well above the average for the country. We do surgery for a group of referring men whom we consider to be well above the average in ability and conscientiousness. We also live in a sound economic area. As a result, we get our cases earlier than most surgeons do, and the following figures show only the advantages of the methods used and of relatively early care.

We speak of five-year survivals and cures. By *cure* we mean that the patient is well and without any suspicion of metastases after five years. In going over our cases, we found 14 per cent who had been five-year survivals but later died of malignancy. None of these people had been free from evident metastases on the fifth anniversary of their surgery.

We are fully aware that some late cases, particularly bone metastases, may appear to be entirely cured at five years but later die of the disease. But this number is so small that it doesn't appreciably alter the percentage, and for that reason we make a distinction between five-year survivals and cures.

The following is a brief survey of our figures:

Grade 1: 100 per cent cures with or without metastases. This represents seven cases without and one case with metastases.

Grade 2 with metastaes: 14 cases, 57 per cent five-year survivals and 50 per cent cures. (A Grade 2 malignancy which survives five years has a 96 per cent chance of being cured.)

Grade 3 without metastases: 20 cases, 95 per cent five-year survivals and 85 per cent cures.

Grade 3 with metastases: 17 cases, 47 per cent five-year survivals and 41 per cent cures. (A Grade 3 patient who lives five years has an 89 per cent chance of being cured.)

Grade 4 without metastases: 7 cases, 57.2 per cent five-year survivals and 42.8 per cent cures.

Grade 4 with metastases: 20 cases, 50 per cent five-year survivals and 25 per cent cures. (A Grade 4 patient who has lived five years has a 57 per cent chance of being cured.)

All types without metastases: 59 cases, 85 per cent five-year survivals and 80 per cent cures.

All types with metastases: 52 cases, 53.9 per cent five-year survivals and 38.4 per cent cures.

Only 7.2 per cent of our cases were Grade 1; 68.4 per cent were Grades 2 and 3. All Grade 2 and 3 cases with or without metastases showed 70 per cent five-year survivals, and 67.1 per cent cures. Of all cases operated upon, with or without metastases, 62.2 per cent were five-year survivals, and 53.1 per cent were cures. There was no operative mortality.

SUMMARY

Improvement in the treatment of malignant breasts is to be strongly hoped for. It is good enough now, however, to justify the careful and thorough use of the wide variety of therapeutic technics now available. On an average, the indicated therapy in any single case is reasonably clear, provided that the clinician's grasp of the entire subject is adequate.

A suggested outline of treatment in these cases has been given.

PAST-PRESIDENTS' DINNER, 1960



These men attended the ISMS Past-Presidents' Dinner, at the Hotel Savery in Des Moines on Monday evening, April 25. In the back row, from left to right, are: Dr. John W. Billingsley, Newton; Dr. Walter D. Abbott, Des Moines; Dr. H. A. Spilman, Ottumwa; Dr. Wendell L. Downing, LeMars; Dr. Fred Sternagel, West Des Moines; Dr. Ben T. Whitaker, Boone; Dr. Gerald V. Caughlan, Council Bluffs; Dr. D. C. Conzett, Dubuque; Dr. T. F. Thornton, Sr., Waterloo and Dr. R. N. Larimer, Sioux City. In the front row, from left to right, are Dr. Charles B. Taylor, Claremont, California; Dr. Robert L. Parker, Des Moines; Dr. Gordon F. Harkness, Davenport; Dr. Walter L. Bierring, Des Moines and Dr. James E. Reeder, Sr., Sioux City.

Industry and Medicine

G. P. McARDLE, M.D.

OMAHA, NEBRASKA

INDUSTRIAL MEDICINE had its origin in ancient times, and no specific date can be cited as marking the beginning of interest in it. We know that occupational hazards were recognized centuries before the advent of Christianity. Aristotle concerned himself with the diseases of runners; Pliny, among other observations, noted the use of masks by certain workers exposed to metallic dust; and first Hypocrates and later Galen wrote on lead poisoning.

In 1700, a book on occupational hazards was written by Bernardino Ramazini, an Italian physician, and it contained epical contributions which have made him acclaimed the father of industrial medicine.

The advances made since the onset of this century have been very great. Considerable research has been done in the past two decades, and the resulting scientific growth has undoubtedly been influential in the establishment of courses in industrial medicine at various universities.

The preceding account is a brief and certainly incomplete review of the steps industrial medicine has taken. Far more important than the specific events mentioned have been the changes that have taken place in the philosophy governing physicians' efforts in this field. Originally, industrial physicians were chiefly interested in administering first aid to the injured, but now we have reached a stage of progress in which we devote chief attention to discovering potential hazards in industry and neutralizing them before they actually inflict harm. From its fragmentary beginnings, industrial medicine has grown into highly organized programs of health conservation which affect the well being of a large part of our population—the 65,000,000 people who are at present gainfully employed. How this development has been attained, and how industrial medicine functions today, will become apparent from the accounts which follow this sketch of its early growth.

THE CURRENT EMPHASIS IS ON PREVENTIVE MEASURES

There is no strict uniformity in the organization and management of medical departments in industry. The factors that determine the nature and scope of a medical department are the character of the particular industry and management's concept of what constitutes appropriate medical service for the workers. Of greater importance, however, though it is often insufficiently emphasized, is a program calculated not only to serve the immediate needs of the workers for whom the medical department is established, but to anticipate further opportunities for safeguarding and improving the health of employees. The enterprising physician in industry should, in fact, be gratified that his work is not so rigidly standardized as to discourage initiative and growth. There are wide opportunities for further development of industrial medicine, limited only by the training, imagination and energy of the industrial physician.

The development of industrial medicine during the past three decades may be said to have exhibited the following successive emphases: (a) surgical, (b) medical and (c) preventive, and great stress has been placed upon medical and engineering control of environmental hazards. The main concern, at first, was with the care of injuries, and the physicians entrusted with this work were chosen because of their surgical ability. In many instances, the choice was also dictated by the physician's proximity to the plant that he served, or by his relationship to management. Because of the compensation laws, great emphasis was given to the need for effective first aid.

Later, in order to save the time that employees were losing in calling on the physician, it became the practice to bring the doctor into the industrial plant for a part of each day, and to summon him at other times when injuries required more skilled attention than the lay first-aid workers could provide. This introduction of the physician into the plant was significant in that it laid the foundation for the present-day industrial medical practice.

When the physician had become, in effect, a part of the plant personnel, his function soon ceased to be purely surgical. He was inevitably consulted by the employees about their medical problems, and even about those of their wives and children, thus introducing what may be termed the medical phase of industrial medicine. This type of practice began, at that time, to incur the disapproval of private physicians—and the plant physicians began to have misgivings about it themselves—because plant doctors were frequently forced to give advice on matters outside of the area for which their services had been engaged. The nature of industrial medical practice needed to be defined, and the relationship between the

Dr. McArdle, a plant physician for Swift and Company, and radiologist for the Union Pacific Railroad and the Western Electric Company, presented this paper at the Second Iowa Industrial Health Conference, in Des Moines, on December 11, 1959.

industrial physician and outside doctors had to be improved. Generally speaking, these objectives have been satisfactorily accomplished by the code of the AMA Council on Industrial Health. The plant physician attends to illnesses and injuries of occupational origin, and refers other disabilities to the worker's own physician. Now that industrial medicine is largely preventive in scope, it is a common occurrence for workers to consult their private physicians on the advice of plant physicians who have discovered conditions demanding medical care.

Mention should be made of the important role which the industrial physician can play in the maintenance of community health. He is concerned with the health of children as well as of adults, for the child is a future worker, and safeguarding child health is one of the surest means of guaranteeing the health of the future citizen. The plant physician is vitally interested also in community housing, community sanitation, and the medical supervision of schools and recreational facilities.

PHYSICAL EXAMINATIONS SERVE IMPORTANT PURPOSES

The programs of physical examinations now followed in most concerns reflect the changing concepts of industrial medicine in general. When first instituted, the physical examination had little bearing on the type of work the employee had been hired to do. The most important function of the examination was to determine the employee's acceptability as a member of a sick-benefit organization. If it occurred to anyone a few decades ago that the physical examination might serve the specific function of determining "the fitness of the applicant for the job he was to do," it is certain that this function did not receive any special emphasis. Only through a relatively slow evolution has the idea of selecting employees on the basis of the necessary neuromuscular coordination, visual capacity, intelligence and physical strength become a widely accepted rule of practice.

Generally, it may be stated, the preplacement examination now has as its major objective "the assurance of the utmost degree of compatiblity between the worker and the job." I should like to emphasize at this point that this is, in addition, one of the important phases of preventive medicine with which the industrial physician deals. It is true, from a standpoint of job efficiency alone, "that a man must be fitted to the task." It is also true that the selection of the applicant is of great importance from the point of view of industrial hazard.

There are two aspects to this question. One deals with the existence of physical conditions that may be aggravated by certain types of work, and the other concerns physical defects which will increase the accident hazard, not only to the employee himself but to his fellow workers as well. It must not be forgotten that even with the best mechanical safeguards, the possibility of accidents exists, and in the majority of cases the human factor—not the mechanical one—determines whether an accident will or will not occur. I don't mean to imply that the preplacement examination is a device for selecting only perfect human material and eliminating all applicants who exhibit physical defects. Such, indeed, is not the case. If it were, not only would the social loss be very great, but the preplacement examination would lend itself to the perpetuation of a cruel and inhuman discrimination. Physicians conversant with this field recognize that physically handicapped persons do make acceptable and competent employees in jobs at which their handicaps don't impair their efficiency.

There is a function of the preplacement examination which is valuable both to industry and to the employee, but is in a sense incidental to the main purpose. This is the detection of remediable defects. It is good practice to acquaint the applicant with these difficulties, and then to urge their immediate correction by his family physician, either as a condition of his employment or as a condition of his acceptance for an insurance program.

The preplacement examination should include a chest x-ray. No greater contribution can be made to the eradication of tuberculosis. It is true that tuberculosis has decreased markedly in the past 40 years, but it is likewise true that the disease continues to be one of the greatest threats to the health of mankind, one person being stricken with tuberculosis every six minutes in this country today.

No physician should consider himself competent to render a physical examination for job placement in industry unless he has a thorough knowledge of his plant's activities, job requirements and hazards. If it is impossible for the physician who is required to make preplacement examinations personally to acquaint himself with the various job requirements—though it really should not be —a system employing job-specification cards may be used.

ALL EMPLOYEES SHOULD HAVE PERIODIC REEXAMINATIONS

So much for a review of preplacement examinations and the preventive phase of industrial medicine. The subject of periodic examinations should also be considered. Periodic examinations are of two types: (1) the voluntary examination and (2) the obligatory one, which must be taken by the workers in hazardous occupations at stated intervals.

I regret that voluntary periodic examinations are not being used to the limit of their potentialities in industry today. The findings of these voluntary examinations should be made known to the worker and transmitted in detail to his physician for whatever medical care the case may demand.

I think all employees over 40 to 45 years of age should have annual health examinations, their extent depending largely upon the facilities available. The periodic examination may yield positive findings relating to occupational exposure, and if such is the case, it is imperative for management to consider transferring the worker to another type of task or to take immediate steps to correct the existing hazard.

Too often, when we speak of physical examinations in industry, we are thinking only of the shop worker as the examinee. The clerical worker and the executive worker in industry have, on the whole, enjoyed fewer privileges in this respect than have the men in the shop. A cardiovascular survey of officers made in a large plant recently included 692 executives between the ages of 30 and 67 years. It was found that over 13 per cent of the group exhibited one or more abnormalities, that over 11 per cent of their electrocardiograms revealed pathologies, and that 7.6 per cent had high blood pressure. These findings appear to suggest the advisability of universal periodic examinations for workers in all divisions of industry. Such examinations should be general in character, and not limited to one system as was this cardiovascular survey.

Still, in some quarters, there is a tendency to assume that curtailments in medical expenditures are synonymous with economy. Yet, the savings effected by eliminating claims for diseases or impairments that antedated employment or had no connection with the workers' jobs can more than make up for the financial outlay that industrial medicine requires in most industries. Then again, industrial medicine can reduce loss of time, can help in placing the individual in the type of work for which he is best suited, can increase the employee's efficiency, can reduce the numbers of accidents and can protect employees from one another's failings.

Even if there were no humanitarian aspect in industrial medicine, its dollars-and-cents value would make it attractive to management. Indeed many industrial executives choose to justify their programs from the humanitarian basis alone.

I want as strongly as I can to emphasize that the results of this type of program should be used only to improve conditions of work and to safeguard the worker. Further, any medical program should be flexible, and should be constantly adapted to the changing needs of the worker, under the rapidly changing conditions in industry. In this manner, the medical program will always be alive and responsive to the workers' needs. It will thus be progressive and will keep pace with developments not only in modern industry but in medical science, which is widening its horizons and increasing its contributions to human welfare.

DOCTORS MUST TAKE RESPONSIBILITY FOR INDUSTRIAL HEALTH

A sound state of health in the industrial population is an absolute necessity, and all of us in the medical profession must recognize that achieving and maintaining it requires not only our immediate action but also our sustained efforts from now on. Neglect of this problem will bring further infringements on our rights, as well as on those of industrialists. Unless we are vigilant in this area, there will be further encroachments by non-medical groups into the field of medical practice.

The person-to-person relationship existing between patient and physician has been, and always will be, based on trust and confidence, and it stands as one of the greatest privileges to which a doctor can aspire. This intimate personal relationship is as important in industrial medicine as it is in private practice. The private practitioner is concerned with keeping his patient free from bodily pain and maintaining him as an economic unit until death. This same duty exists for the industrial physician. This personal contact is far more important than anything else in keeping our working population at its best.

Besides being a doctor, the industrial physician must be a politician, a diplomat, a housekeeper, an accountant, an executive officer and last, to put it bluntly, a salesman. I mean that he must understand people, and be familiar with their desires, motives, actions and reactions. He must be able to create a desire for what is required.

Under the pressure of strenuous competition alone, the employers have developed machinery, equipment, tools and various technical procedures in their various businesses to an extremely high degree of efficiency and labor-saving accomplishment. They are required by law to provide every safeguard against mechanical hazards. They have developed a sound state of fitness in "mechanics," but we in the medical profession must develop the "humanics."

In a study of the human equation in industries over a period of 25 years, it has been found that the average individual worker is only 75 per cent physically efficient. We could argue, moreover, that the principal reason for the 25 per cent deficiency is the worker's ignorance of such important factors as dietetics, nutrition, prudent purchase and efficient preparation of food, personal hygiene, the control and cure of communicable diseases, the treatment of diseases affecting the functional organs of the body, and kindred matters influencing the well being and fitness of the human machine.

In the preventive phase of industrial medicine, a considerable portion of the 25 per cent deficit in physical efficiency can be salvaged through increasing the employees' knowledge—which, from

our point of view, is the practicing of a good grade of "humanics." I cannot stress this aspect too much. There has been too great an emphasis upon "mechanics" and not enough on "humanics."

A matter of general interest is the fact that the physician in industry is responsible not merely to his employer but also to the worker whom he treats. He is a physician first, and his obligation to the company must come second.

Over 65,000,000 workers actually take home pay nowadays, in these United States, and it is the solemn duty of us in industrial medicine to continue treating them in a fair and equitable way as human engines, seeing to it that they keep at top performance, not only for the benefit of their employers, but for themselves and for their families who depend upon them.

HERE ARE SOME STATISTICS

Perhaps you will think that too much of what I have said concerns intangible things, but let me quote some tangible ones. In 1956, 14,300 persons were killed and there were 2,000,000 disabling injuries connected with employment. The economic loss amounted to $3,600,000,000. The total lost time was 295,000,000 man days, equivalent to the shutdown of plants with an aggregate of a million employees for an entire year!

Industry and medicine must continue to live together, and must expand their thinking to overcome this vast loss of life, time and money.

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What an Industrial Nurse Can Accomplish

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THE MAJORITY OF industrialists are ignoring losses totaling thousands every day. The time and interest they have spent on safety and production methods have definitely improved working conditions and have saved considerable amounts of money, but if other dollars are to be saved, more emphasis will have to be placed on medical control.

Executives of companies with employees totaling more than 500 have already found that their need is for a full-time registered nurse, but what I shall have to say will principally concern those who employ fewer people and perhaps haven't yet recognized their need for such a person. For the benefit of employers with full-time nursing services, I shall also cover the health maintenance phases of a medical program that need stressing if money is not to be lost.

EVERY PLANT NEEDS NURSING SERVICE

So often, the heads of smaller industries tell me, "We cannot afford a full-time nurse." Actually, they cannot afford to be *without* one on at least a part-time basis. A rule of thumb for nursing needs is one hour of nurse service per day for every 100 employees. Plants with numbers of employees ranging under the 300 mark need a full-time, trained first-aider working under the direction of a part-time registered nurse and a doctor. Industrialists who employ 300 or more should seriously consider hiring a full-time registered nurse. She should be placed on the shift with the largest number of employees, and yet should work hours that overlap both the first and second shifts. In this manner she can be in contact with the greatest number of employees.

The health staff of the plant that employs fewer than 300 people should consist of a part-time doctor and a part-time nurse. They should be in the plant every week on a regular schedule. For a part-time nursing service, a registered nurse's time may be divided among two or thee plants in a given geographic area. The combined total of employees in such a part-time service should not exceed 500 if the service is to be effective. The nurse will spend a specified number of hours each day at a specific time in each plant. A local physician acting as the company doctor should be brought into the plant for a certain number of hours per week, according to the needs of each plant. The rule of thumb for doctor service is one doctor hour per week per 100 employees. This arrangement will allow the program to have the direct supervision of an M.D.

When management institutes a new medical

The author is an occupational health consultant in the Loss Prevention Medical Department of the Liberty Mutual Insurance Company. She made this presentation at the 47th National Safety Congress and Exposition, in Chicago, on October 19, and at the Second Annual Iowa Industrial Health Conference, in Des Moines, on December 11, 1959.

program or increases the activities of an existing one, there is always the question of how to set up the service and how to get the employees to accept it. There are several means. The employer should consult with the union to explain the purpose of the medical program. Then, also before it is started, proper announcements of the service should be made on the bulletin boards and through plant publications or through special announcements to all of the personnel, making plain that the service is being provided for the employees' welfare, and to assure proper care on the job and health advice and counseling as needed. The announcement must show the nurse's name and tell the time she will be at the plant each day.

An industrial nurse with the proper attitude, tact and personality will inspire the confidence of the workers, and they will then come to see her regularly with their many problems.

THE DUTIES OF AN INDUSTRIAL NURSE

A plant nurse has the following duties:

1. She renders nursing care in all injuries that occur in the plant and refers to the doctor all injuries that are beyond her limitations as a nurse.
2. She does redressings and retreatments of injuries which initially required the doctor's care.
3. She keeps records of all visits to the first-aid room. These records can be analyzed for the purpose of spotting hazards in the plant.
4. She gives first-aid treatment in all illnesses. This service assists the workers in remaining on the job whenever possible.
5. She maintains a clean dispensary, and restocks supplies.
6. She interprets medical findings for the workers and assists them in correcting remediable defects through referral to their respective doctors and/or to a community agency.
7. Part of the nurse's job will be health education—teaching workers to avoid illness and to care for their defects.
8. The nurse conducts periodic plant inspections to assist in accident prevention from a medical standpoint.
9. She instructs first-aiders to administer care in her absence.

SHE CAN SAVE MONEY FOR HER EMPLOYERS

Thus far, I have discussed the type of medical service appropriate for each of various sizes of plants, and I have outlined the nurse's duties. I shall now discuss some of the economic values to be derived from the use of in-plant medical personnel.

Direct cost reduction. Medical costs can be reduced through the nurse's handling many cases that would necessitate a doctor's visit if the plant had only a first-aider. Also, the nurse can handle many retreatments for which the worker would have to visit the doctor's office if there were only a first-aider.

Compensation costs can be reduced through the nurse's efforts. She can prevent loss of time due to infections. Her skilled and prompt handling of cases will further reduce lost time. The first-aiders will benefit from her instructions, and when they have coped with emergencies in her absence, she will follow up the cases. Finally, the nurse will follow up on severely injured employees for the purpose of rehabilitation.

Indirect cost reduction. A part-time medical program in a small plant reduces "down time." The average visit to a doctor's office involves an average of an hour that the employee must spend away from his job. This cost includes the employee's wage, even though he is not working at his bench.

There may be a saving in transportation costs. In some instances it might otherwise be necessary for a second employee to take the injured worker to the doctor's office, and thus the time of two workers would be lost.

Absenteeism will be reduced. The American Association of Manufactuers states that every day's absence costs the employer 1½ times the man's daily wage. With good medical control, absenteeism can be cut at least 30 per cent.

There will be an improvement in employee health and production.

Complete medical records of injuries and illnesses will be maintained for the protection of all concerned, and for the detection of unhealthful conditions or unsafe practices.

Many illnesses can be prevented or kept under control by an industrial health program. This is accomplished through personal health counseling for employee illnesses or home problems. Emergency care will be available to employees for minor illnesses, thus helping to keep workers on the job. Employees tend to report to work if they know the nurse is on hand. The nurse can recognize symptoms of illness in its early stages and can advise the worker to consult his family physician, dentist or other agency as indicated. Remedial measures can then be taken to prevent potential major illnesses, and the complications of disabling states of chronic diseases, thus giving the employer one more measure of control over his insurance costs.

Employee health will be improved through health education regarding the unavoidable hazards of the particular plant and regarding such general concerns as the improvement of nutrition, the early detection of cancer and tuberculosis, and the avoidance of other diseases.

Accidents can be further reduced through an in-plant medical program, for the nurse can observe potential hazards from a medical viewpoint in her plant inspections. She can also determine the sources of accidents through analyzing her records and through her discussions with injured

employees. Through health counseling, worrisome problems can be relieved, thereby preventing many accidents that might result from inattentiveness.

Industrial relations will be improved, for the nurse is a neutral buffer between employee and employer, and many personal grievances can be minimized. In addition, the medical program constitutes tangible evidence of management's interest in the employees' welfare.

Selective placement of workers will be more efficient and more effective with the assistance of the nurse, and she further enables the company to take care of its own.

Workers will be trained to report injuries promptly, to keep dressings dry and to report the following day for a check on recovery. Today's minor injury can be tomorrow's costly case if proper treatment isn't given immediately.

Surgical cleanliness will be maintained at all times. Minor accidents could otherwise become excessively costly and involve lost time through infections. Qualified nursing service results in satisfactory recovery.

The nurse's knowledge of occupational disease hazards in the work environment, learned during her periodic plant surveys, will allow her promptly to recognize symptoms of occupational diseases, and will insure the prompt treatment and early recovery of the affected employee.

Rendering proper first aid to an ill employee and expediting his prompt referral to a physician can save his life. Severe illness seldom occurs, but when it does, workers and their families appreciate the consideration shown them by the company.

Assistance in accident investigation is important, and medical personnel who have been on the spot can be especially valuable in this regard. Furthermore, the presence of a nurse tends to prevent accidents by making all employees safety-conscious.

Nurses help to improve management-employee relations.

All in all, an in-plant medical program—and, in particular, an industrial nurse—will increase industrial production, improve quality and thus increase sales.

The above direct and indirect economic benefits are only a few of the desirable results of industrial medicine. In other words, in-plant medical personnel certainly "pay their way."

ADDITIONAL USES FOR THE NURSE'S SKILLS

Management may wish to make all or just a few of the following additional uses of the nurse's skills. Her advice can be asked about the correction of working conditions that cause illnesses and/or injuries through excessive fatigue, inadequate ventilation, poor lighting or excessive heat.

Through the nurse's interest in the employees' health and welfare, management can expect increased morale and efficiency, decreased labor turnover, and the conservation of the health and energies of older workers, thus assuring maximum service from skilled personnel.

The nurse can cooperate with the public health nurse and other community workers to see that employees take full advantage of all available services for the alleviation of economic hardships.

Individual or group conferences are indicated where there has been a high rate of absenteeism, accident proneness or difficult home problems. Through the nurse's counseling, management will find an effective means of reducing absenteeism due to illness and personal problems.

All employees returning to work after an illness can be checked by the nurse. Employees not sufficiently well to return to work could encounter a relapse or become injured as a result of physical inadequacies.

When new employees start work, the nurse can most effectively explain available first-aid facilities and general company policies regarding the reporting of accidents. Thus, she can assist in securing prompt reports of mishaps and illnesses, and can be a major factor in making employees safety-conscious.

Management can have the nurse prepare a section on health and first-aid for the booklet on company policies that is given to each new employee. Employee morale is improved when there is a full awareness of the facilities provided.

The nurse will set up reports and records as approved by management, the medical director and the insurance carrier. The following records are important aids to the employees' health and safety:

1. A day log will tabulate the daily case load. Analyzing it will uncover health hazards in the plant and will focus attention on repeaters.

2. Individual record cards will assist in health conservation and act as guides in case handling at the time when injuries occur, or when illnesses have been reported.

3. A monthly analysis will play an important role in accident prevention, disclosing the trend of injuries and/or illnesses department by department.

The nurse can participate in the interpretation of workmen's compensation, group insurance, and other health and welfare plans. Many nurses in industry complete forms for these insurance plans, thereby relieving the clerical staff in the general office. Thus the nurse has a good opportunity to discuss health problems with employees and to follow up on the employees' known physical defects.

The nurse can be an invaluable asset to management's absentee-control program. A medical absentee program is the coordinated service within a plant to determine who are off the job on account of illness or injury, why they are absent, and for how long they are likely to be gone. The

objectives of this program are (1) to increase production through the reduction of lost time; (2) to determine which workers have a high medical frequency; (3) to aid the employees to improve their physical health; and (4) to coordinate in-plant services to aid in their early rehabilitation.

A FEW EXAMPLES

So far, I hope you don't think I am just attempting to glorify the nurse's position in industry. I may have been doing that to a certain extent, for I am completely sold on it. However, since figures don't lie (even though liars figure), I should like to give you some examples of plants that have been entirely sold on the value of the industrial nurse.

1. A research corporation with 170 employees hired a nurse for an hour a day, five days a week. It now employs her four hours a day, five days a week.

2. A printing concern with 160 employees hired a nurse for one hour a day, five days a week, and now has increased her time to three hours a day, five days a week. The management compared its "before and after" compensation costs and found that a year earlier it had paid out a total of $6,567 in compensation medical costs, as compared to $784 during its first year with a nurse. Believe me, the difference was *more* than the nurse's salary!

3. A fire protection concern with 300 employees hired a nurse for one hour a day for five days a week. It now uses her four hours a day, and expects soon to replace her with a full-time nurse.

4. A concern manufacturing industrial rubber products and having 250 employees hired a nurse for two hours a day, five days a week, and has increased her hours to three per day. The management found that in the six months before the nurse's arrival, there had been a total of 23 reported injuries, but that during a similar period since then, there had been only five. The number of lost-time injuries had been reduced from five to one.

5. An iron works with 160 employees began employing a nurse four hours a day, five days a week, and that plan has been found altogether adequate.

6. A machine manufacturing company with 290 employees hired a full-time registered nurse. Before her arrival, it had had 114 reported cases in a given length of time, but during a similar period thereafter it had just 23. Prior to her coming, there had been 13 lost-time accidents, as compared with just one in the like period after her coming. In the "before" period, there had been 573 man-days of lost time, but in the "after" period there was just one man-day lost.

These and many more examples can be found over the country just by talking to the managers of industrial plants that have put in medical programs. Ask the man who has one!

THE NURSE'S FUNCTIONS ARE SURE TO MULTIPLY

Thus far, I have suggested that the managers of industries employing fewer than 300 people should provide part-time nursing and physician's services. Those employing 300 or more people should consider hiring a full-time registered nurse. I have explained what her duties would be, I have shown how she would pay for her own salary, and I have cited examples of plants that have instituted such programs. I should like also to point out some other reasons why managements should have medical personnel on their payrolls.

The numbers of disabled and older people in the population are increasing. This situation can bring problems to the employer. Among them are the absenteeism due to chronic illness, the high costs of medical benefit policies, and the difficulties of correct job placement for elderly and physically handicapped people. All of these problems require the help of persons trained in industrial medicine.

The competition among industries for efficient workers has impressed managements with the importance of safeguarding the health of the employees in whom they have invested time and money. Labor turnover is expensive in any industry.

There is a national consciousness of the large number of emotionally disturbed persons in the population. Since many of them are on company payrolls, counseling and aid from the firm's medical staff will help to solve their emotional difficulties and thus keep them off the accident rolls.

Industrial advances and the atomic age are bringing to the job new materials and processes that may affect the health of the workers.

Many industries have adopted health insurance plans as fringe benefits for employees. Their managements reason that rather than pay those who are absent because of illness, it will be more economical to pay for a program that will help keep them from becoming ill. This reasoning has been largely responsible for the start of the periodic physical examinations program.

Many companies began with periodic physical examinations for executives. In many cases these programs have resulted in startling discoveries of unexpected physical disabilities, and have led to the offering of periodic examinations to all employees. This type of program must be under the direct supervision of people trained in industrial medicine.

Unions have pressed managements to include benefit insurance provisions covering the medical needs of workers in their collective bargaining agreements. This situation is causing managements to decide that it is smarter to have preventive health services that will detect trouble

in its early stages than to pay the heavy insurance costs that result from more extensive remedial care later on.

It is understood, of course, that the smaller plant with part-time industrial medical personnel must be limited in the scope of the medical program it can conduct. The plant that has a full-time registered nurse and more nearly full-time doctor service can provide a much more comprehensive medical program.

Every industrial health program, however, should be set up to conserve the health of the worker, for the worker's health has a direct bearing upon his productiveness. Good medical control pays dividends in dollars and cents. By preventing or minimizing injuries and improving the health status of its employees, management can reduce its non-occupational insurance as well as its workman's compensation insurance costs.

Workers must be kept on the job and producing!

Promethazine Hydrochloride: Indications And Schedules for Suppository Therapy

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IOWA CITY

THE ORAL TREATMENT of nausea and vomiting is often impossible because of the patient's inability to ingest or retain the medication. In such cases, suppository forms of various antiemetics have been tried.[1-3] Cone[4] has reported favorably on the use of promethazine hydrochloride suppositories for the treatment of nausea in 150 children, describing the effect of a single dose. Piserchia[5] and Smith[6] have used this form of promethazine in the preanesthetic sedation of children.

Our statements are based on the use of promethazine suppositories* in general practice. Our series consisted of 86 cases in which promethazine therapy was indicated, but the oral route was unsatisfactory.

The antiemetic and sedative qualities of promethazine have been widely reported. The purpose of this paper is to describe the dose schedule that we have found effective in the treatment of various conditions with promethazine suppositories. We hope that the experiences we report will permit other physicians to anticipate the needs of their patients for this form of therapy.

CLINICAL OBSERVATIONS

In preliminary trials, 12.5 mg. suppositories were used in treating patients who weighed less than 75 lbs. It was found, however, that such a dose was rarely adequate. The 25 mg. suppository was used without any adverse side effects even in children under two years of age. This dose was subsequently used for all cases. The schedules that were effective in various conditions are summarized in Table 1.

Thirty-eight persons were treated for acute gastroenteritis. In all of these cases, relief from nausea occurred about 45 minutes after insertion of the suppository. The period for which control was maintained varied from four to 12 hours, if nausea recurred at all. The variation was unrelated to body weight, and the control period could not be predicted from the severity of the symptoms. It is recommended, therefore, that a second dose be given when the symptoms recur.

In acute respiratory infections in children, vomiting is a common feature. In most cases it responds readily to oral therapy between episodes. Promethazine suppositories were used for 16 patients who had been vomiting for several days and had not responded to various oral medications. In these cases the lag period was more prolonged than in gastroenteritis patients, but within two to four hours, nausea was sufficiently controlled to permit adequate liquids by mouth. Dehydration and resulting hospitalization were avoided through the use of a single suppository in these cases.

Promethazine suppositories were used for seven patients whose histories indicated food poisoning. Their symptoms included vomiting, headache, abdominal pain and dizziness without diarrhea. The average schedule for these patients was one suppository every four hours. On this schedule, they were able to retain fluids within six to eight hours.

Ten patients were given the suppository form

* Phenergan® Hydrochloride Suppositories, available from Wyeth Laboratories.

of promethazine for nausea of pregnancy. This form was indicated because of inability to retain oral medication. Two suppositories per day were prescribed, one at bedtime and the other upon awakening. With this treatment, morning sickness was reduced, and daytime nausea was eliminated.

Motion sickness in young children was prevented through the insertion of one suppository prior to the trip. Control was maintained for about 12 hours in the 10 patients studied. There were no complaints of excessive drowsiness.

Insomnia was treated in three children between two and three years of age. In all cases, the insomnia was associated with temporary emotional strain. Suppositories were used because oral medication had been refused or had been ineffective in normal doses. In these cases, one suppository at bedtime produced sleep without the excitement phase frequently encountered with barbiturates. No effect was noted the following morning. The medication was discontinued at the end of one week, and in two of the three cases there was no recurrence of insomnia.

Two cases were encountered in which nocturnal scratching complicated the treatment of atopic eczema. The suppository form was indicated because the patients were under one year of age. Nocturnal scratching was completely eliminated by inserting one suppository at bedtime. The disease was effectively treated in both cases by combining promethazine and local therapy.

SUMMARY

Promethazine suppositories were used in treating 86 patients. The conditions treated included acute gastroenteritis, vomiting associated with acute respiratory infections in children, food poisoning, nausea of pregnancy, motion sickness, childhood insomnia and atopic eczema with nocturnal scratching.

Recommended dose schedules, based on the authors' experiences in general practice, have been presented.

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TABLE 1

RECOMMENDED SCHEDULES FOR PROMETHAZINE HYDROCHLORIDE SUPPOSITORIES

	Indication		
Diagnosis	*For Promethazine*	*For Suppository Form*	*Recommended Schedule (25 mg. Suppositories)*
Acute gastroenteritis	Vomiting	Inability to retain oral medication.	One suppository, repeated if nausea recurs.
Acute respiratory infection	Vomiting	Inability to retain oral medication.	One suppository, followed by adequate liquids when nausea is controlled.
Food poisoning	Vomiting	Inability to retain oral medication.	One suppository every four hours until fluids are retained.
Nausea of pregnancy	Nausea and vomiting	Inability to retain oral medication.	One suppository at bedtime and one on awakening.
Motion sickness	Prevention of motion sickness	Patient too young for satisfactory oral medication.	One suppository before each trip.
Insomnia in children	Insomnia	Refusal to take oral medication or poor response with oral medication.	One suppository at bedtime.
Atopic eczema	Nocturnal scratching	Patient too young for satisfactory oral medication.	One suppository at bedtime.

Clinical Experience With Neo-Gel, A New Antacid

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GASTRIC DISEASE is probably as old as humanity, and its treatment has probably been going on as long as there have been physicians. Of all the many types of therapy which have been developed along the way to treat peptic ulceration, two have survived in modern medicine, and these involve diametrically opposed dietary regimens.

Many physicians today employ the Sippy regimen,[1] with gradual progression to a bland diet. This is advocated, for example, by Kirsner,[2] who feels that it is not necessary to be so strict as in the past regarding diet. Some physicians, on the other hand, advocate an unrestricted diet in conjunction with antacids, anticholinergics, vitamins, etc.[3, 4] Common to all these methods of treatment is the use of antacid preparations to neutralize gastric acid.

The purpose of this report is to bring to the physician's awareness a new antacid preparation, Neo-Gel, which we have tested clinically on 36 patients over a period of three months.

Neo-Gel is a balanced combination of colloidal, hydrated tricalcium phosphate and magnesium trisilicate. It differs from most of the commonly used antacids on the market today in that it contains no aluminum, which is felt to have a constipating effect. The Neo-Gel for this trial was supplied in suspension and tablet forms by the manufacturer, Diamond Laboratories, Des Moines, Iowa.

The 36 patients were selected at random from among a county hospital's in- and outpatients who presented gastric complaints. The age range was from 18 to 85 years, and 60 per cent of the patients were between 40 and 70 years of age. The most frequent presenting complaints were abdominal bloating, sour eructations, epigastric discomfort, pain and pyrosis. Diagnostic findings can be summarized as in Table 1. (Some patients had more than one condition.)

These patients were placed on Neo-Gel therapy, and on subsequent visits were questioned on a variety of points.

Dr. Jackson is a resident in surgery in Yankton, and Dr. Ravreby is chief of medicine at Broadlawns-Polk County General Hospital, in Des Moines.

TABLE 1

DIAGNOSTIC FINDINGS

Esophageal hiatus hernia	1 patient
Functional gastrointestinal disorder	9 patients
Gastritis, cause unknown	2 patients
Gastric ulcer	3 patients
Duodenal ulcer	7 patients
Dyspepsia associated with systemic disease	9 patients
Iatrogenic dyspepsia	2 patients
Obstetrical dyspepsia	4 patients
Post-gastrectomy syndrome	1 patient

RESULTS

Since antacid therapy is not necessarily indicated as primary therapy in all of these conditions, it is perhaps unfair to evaluate a new antacid under such random circumstances. However, we feel that Neo-Gel provided very satisfactory antacid therapy in this heterogeneous group of patients.

Palatability. Twenty of the 36 patients reported the palatability to be "good"; 12 reported it "fair"; and four reported it "poor." Of the 10 ulcer patients, five found it "good"; five found it "fair"; and none found it "poor."

Lack of constipating effect. Only four of the 36 patients reported any degree of constipation, and only one of these was an ulcer patient.

Degree of daytime relief. Eighty-three per cent of the total patient group reported "good" or "fair" daytime relief, and 17 per cent reported "poor" relief. Of the 10 patients in the ulcer group, only one patient reported "poor" relief.

Degree of night-time relief. Only 24 of the 36 patients used Neo-Gel for night-time relief. Of these, 83 per cent reported "good" or "fair" results. Of the nine peptic ulcer patients in this group, *all* reported "good" or "fair" relief.

Comparison with previous antacids. Thirty-one patients had been using antacid therapy prior to this study. Of them, 61 per cent stated that Neo-Gel gave them better relief; 20 per cent stated that the relief was comparable to that achieved previously; and the remainder felt that the relief was not as good. This same ratio held for the ulcer group.

Side effects. None of the ulcer patients reported any side effects, except one 59-year-old psychoneurotic patient who reported nausea. Of the total group of patients, two reported constipation that could be attributed to Neo-Gel. Two others had histories of chronic constipation.

CONCLUSION

This short-term study on the clinical use of Neo-Gel indicates that it is an effective new antacid. We are particularly impressed by the fact that 61 per cent of the patients found it to be more effective than other antacids that they had been using.

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Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A WHITE BABY BOY was born six weeks prior to the expected date. The mother stated that during her pregnancy she had had no illness. She had a history of "thyroid disease" three years prior to the pregnancy, and it had been treated by irradiation. During the pregnancy, she had been given thyroid and iron therapy. There was no family history of jaundice or remarkable anemia. Four siblings were healthy.

The onset of labor was spontaneous, and the delivery was described as precipitous. The infant's birth weight was 6 lbs. Although the baby cried spontaneously, his respirations were so slow and shallow that he was placed in an incubator to receive oxygen and Alevaire therapy. When oxygen was discontinued for a brief time on the second day, cyanosis appeared. His pattern of breathing was then described as "shallow and rapid, with periods of apnea followed by cyanosis." He could not take oral feedings. Because he had fever as high as 102° F. on both the first and second days of life, penicillin was given.

A careful physical examination was done on the third day of life, and an increased startle reflex was the only positive physical finding. On that day, the infant had a generalized convulsion that lasted for several minutes. During the following three days, his respiratory pattern remained the same, numerous episodes of muscle twitching were observed, and several generalized convulsions were noted. Between attacks, the baby was hypotonic and no Moro reflex could be elicited. His therapy consisted of oxygen, barbiturates, caffeine, aqueous adrenalin and subcutaneous fluids.

On the sixth day of life, the infant's general appearance was improved, and he accepted and retained oral feedings. The convulsions ceased, and sedation was discontinued. On the ninth day of life, he was taking two-ounce feedings and his weight was 6 lbs. 5 oz. He seemed to have a mild upper-respiratory-tract infection. His stools were described as "acholic."

On the sixteenth day of life, the baby was listless. His general appearance was otherwise good, but for a mild icterus and pallor. Feedings were given with difficulty, and marked hypotonia was present. The occipito-frontal circumference of the head was 37.5 cm. The liver was palpated 3 cm. below the costal margin. The stools were "light colored," and the urine was dark yellow. A low-fat formula was started.

By the thirty-fifth day of life, the boy had made little progress in physical growth, but his parents thought his alertness was increasing. He weighed 7 lb. 3 oz. He was mildly icteric. The liver was palpated 4 cm. below the costal margin, and the spleen was palpable at the costal margin. The color of the stools and urine remained the same. With the appearance of anemia, he was hospitalized and given two transfusions.

When the baby was 79 days old, he was referred to the University Hospitals for further study and care.

At the time of his admission to this hospital, the baby was described as an alert, small infant with "bright yellow" skin. The head was normal cephalic, and the occipito-frontal circumference was 37.5 cm. The right arm and leg seemed more active than the left. The liver was palpated 4 cm. below the costal margin, and the tip of the spleen could be felt. The baby took between four and six ounces of a milk feeding every four hours. Numerous stools were examined, and all were pale yellow in color. The urine continued to be dark yellow. Radiographic studies of the chest and skull were thought to be within normal limits.

Numerous laboratory examinations were carried out. A 60 cc. blood transfusion was given on the third hospital day. After a surgical consultation on the seventh hospital day, it was decided that an operation should be performed. On the next day, however, before this could be done, the baby had a sudden onset of irregular breathing marked by long periods of apnea. He became unresponsive. Further radiographic examinations were obtained, and bilateral subdural taps were done. Oxygen and antibiotic therapy were given. Two hours after the onset of his acute illness, a generalized convulsion occurred that lasted for approximately an hour. Afterwards, the infant was non-responsive and flaccid. Four hours after the onset of his acute illness, there was a recurrence of a generalized convulsion, and the baby died.

SUMMARY OF CLINICAL DISCUSSION

Dr. W. W. McCrory, Pediatrics: We have what appears to be a straightforward protocol, and I should like to believe that we aren't going to have any problems in establishing the diagnosis. There are two points, however, that give me pause. First, a straightforward case is rarely chosen for CPC, and second, although it appears that all the information has been provided in the protocol, we probably need some additional data on some aspects of the case. With these two reservations, I shall move ahead and do my best.

The easiest procedure for me would be to read through the protocol, stopping every now and then to make an observation. I shall then make a final summing up, and afterwards there will be an opportunity for others to agree or disagree with me.

The first paragraph cites information that is interesting, but not necessarily pertinent to the diagnosis. We have the history of a precipitous delivery of a smaller than normal infant, though one couldn't really classify the baby as premature. The important thing, it seems to me, is that this infant had a spontaneous onset of respirations, but his respirations were slow and shallow. The patient had to be placed in an incubator, and had to be given oxygen and Alevaire therapy. From the information available, it is difficult to determine whether the respiratory distress was due to central nervous system depression or to an obstruction of the respiratory passages. The fact that respiratory distress continued, necessitating that the infant be placed in an incubator and be given Alevaire, may indicate that the clinical impression was "hyaline membrane disease." On the other hand, it may just have been part of the routine approach to oxygen therapy existing then for young infants. We note that when oxygen was discontinued, cyanosis reappeared, and this would suggest that the respiratory problem may have been central. The driving force for respirations, so to speak, would appear to have been insufficient, and there was no peripheral obstruction to ventilation. I think this point may become progressively more important.

The pattern of breathing continued to be shallow and rapid, with periods of apnea followed by cyanosis. If we make the most of the information available, it seems probable that we must consider a perinatal central nervous system disturbance. The infant didn't feed, and this symptom also fits with intracranial damage. He had fever as the first indication that infection may also have been a problem. Penicillin was given, but we have no further information on this aspect of the case.

A careful physical examination on the third day of life didn't contribute much new positive information. The infant had a startle reflex, as would be normal at that age. The absence of such a reflex would have been of concern. It was on that third day when the baby had a major generalized seizure. This must have been a fairly alarming development. In trying to follow through, it would seem to me that it is further evidence of a central nervous system problem in this infant. The respiratory pattern, meanwhile, remained the same, and there were twitchings and convulsions. Between such attacks, the infant was hypotonic, and no Moro reflex could be elicited. A modification in neurologic response to testing in infants post-convulsively is not necessarily surprising or diagnostic of localized injury.

At this point, if we consult the laboratory sheet, we find information suggesting a new diagnostic problem that must be considered. We find that the total bilirubin was 12.5 mg. per cent on the third day. I trust that this would have been associated with visible jaundice, but whether jaundice was visible or not, there had been a rise in serum bilirubin.

We may now try to put some of these findings together. The patient was a newborn who presented with evidence of possible central nervous system disease and pulmonary distress. There was some suggestion of infection, as evidenced by fever, and jaundice was present by the third day. I can find no indication that a lumbar puncture was done, though it might have been of help in establishing a diagnosis. Also, there is no information as to whether this was the first day on which jaundice was noticed, and this finding could also be of some importance.

The circumstances under which a three-day-old baby could present these problems are, I think, too varied for individual review at this point. The important major disturbances that we would have to consider would be hemolytic disease of some kind causing jaundice and possibly an associated kernicterus. Kernicterus, however, is unlikely if the bilirubin is less than 20 mg. per cent, and it couldn't explain the early symptoms that preceded the appearance of recognizable jaundice in this

infant. Birth injury, then, must be considered.

We must also consider other causes of jaundice in an infant three days of age. One cause could be infection. Although the white count was only 5,000, it is well known that newborn infants may fail to show much leukocytosis or granulocytosis with infection. Accordingly, we cannot exclude infection on the basis of the information available.

The hemoglobin was not decreased, and the Coombs' test was negative. I believe we can now exclude hemolytic disease due to a major blood group incompatibility. We can't exclude a less severe erythroblastotic state such as an ABO incompatibility with this information. We must also consider whether liver disease of some kind was present. I shall discuss the possible types later.

Now, to return to the protocol, the infant was managed by symptomatic measures, and improved so that by the sixth day he was actually much brighter. He was accepting feedings, and the convulsions had ceased. On about the ninth day, we are informed, there was an occurrence that shrinks the differential diagnosis that we have to consider. This was the passage of acholic pale stools. This information is evidence that this baby apparently had obstructive jaundice. We may thus be reminded of the question of the so-called "inspissated bile syndrome." This label for obstructive jaundice in the newborn appeared in the literature about five years ago, and I think that by now it fortunately has almost disappeared. The "inspissated bile syndrome" included a collection of jaundice conditions of varied etiologies occurring in little infants. Our current thought is that it is much better not to talk of the "inspissated bile syndrome," but rather to attempt determining the particular cause in each case of obstructive jaundice that occurs early in life.

We now have to consider congenital intra- or extrahepatic biliary atresia, an extraneous mass occluding the common duct, and red-cell hemolysis due either to infection or to some erythroblastotic process, and lastly infection (viral or bacterial), particularly of the liver. Obstructive jaundice would have to be considered in any infant in whom jaundice persisted beyond the first week after birth. Although jaundice during the first week is not uncommon, even severely jaundiced babies with erythroblastosis normally show rapid clearing of the jaundice within the first or second week. In the absence of hepatic obstruction, there shouldn't be a persistence of jaundice or a passage of acholic stools. We must admit that in rare instances such a syndrome has been seen following severe erythroblastotic disease, but the commoner causes are congenital biliary atresia or some type of hepatitis.

It is now recognized that a major factor contributing to the development of jaundice in newborns is immaturity of liver function in respect to the baby's ability to excrete bile pigments. This is a temporary defect, and normally doesn't persist beyond the first week or so. Within the past few years, however, a condition associated with persistent non-hemolytic jaundice, apparently due to an inherited defect in bile conjugation, has been described (Crigler-Najjar syndrome). This is an extremely rare disturbance.

Returning to the protocol, we find that the baby's condition was described as listless, and we are told that pallor and icterus were still noted on the sixteenth day. He was hypotonic, and fed with difficulty. These findings certainly indicate that the infant wasn't healthy and normal. It is of interest to note that the head circumference was 37.5 cm., or within normal limits for an infant of this age.

We now have the first mention that the liver border was palpable. It is worth noting that a low-fat formula was prescribed, probably because of the occurrence of acholic stools. Although it may seem that this was justified by the occurrence of obstructive jaundice, it is rarely necessary or useful in young infants unless they have a true steatorrhea. A low-fat formula for infants poses a hazard to general nutrition because it reduces caloric intake. It is questionable that it is of any benefit because of decreased intolerance to fat absorption.

At 35 days of age, we see that the baby was making little progress in physical growth, though the parents felt that he was alert. The weight of 7 lbs. achieved by that time would certainly be unflattering to any pediatrician. This was growth failure. The child should have weighed considerably more if he had been normal and healthy. We note that there was persistence of hepatomegaly, and now find that the spleen was palpable. The absence of bile in the stools continued, along with the presence of bile in the urine. We then find a report of anemia, for which the baby was hospitalized to receive two transfusions. The development of anemia in this infant doesn't help particularly in our differential diagnosis. Any of the disturbances that I have mentioned—viral or bacterial infection or congenital biliary atresia—could produce hepatocellular damage and cause anemia.

We now move to the report of the baby's first admission to University Hospitals, at 79 days of age. He is described as having presented a bright-yellow appearance. One other possibly significant finding on this examination was the measurement of the head circumference. It was essentially the same as the previous measurement, and thus we can conclude that the head was smaller than normal for this infant. This finding might be indicative of microcephaly. If the infant was generally failing to thrive, however, the small head was just part of the general failure of growth, and not an indication of microcephaly. We find confirmatory evidence of neurologic damage in the differ-

ence in activity of the right and left arms and legs. There is also hepatosplenomegaly. Laboratory studies confirmed the absence of bile in the stools and its presence in the urine. The absence of urobilinogen would be expected if there were biliary obstruction to the passage of bile. An infant coming to a pediatrics department at 80 days of age with this story would certainly need to be given skull and chest x-rays. I note that they were obtained and have been brought along.

In the differential diagnosis I haven't yet mentioned two diseases that we expect all junior medical students to list on examinations that ask for the differential diagnosis of jaundice in young infants. These, obviously, are toxoplasmosis and cytomegalic inclusion disease. We know that in both of these diseases one can find intracranial calcifications. It is with some disappointment that I note that x-ray examinations contributed no helpful information, since there were no intracranial calcifications. There also was no evidence of pulmonary pathology. I should be most interested in knowing whether the fundi were examined, and if so, what was seen. Can you tell me, Dr. MacQueen?

Dr. John C. MacQueen, Pediatrics: They were within normal limits.

Dr. McCrory: The finding of chorio-retinitis or cataracts would have had a bearing upon our diagnosis. In view of the differential diagnosis still posed by this infant, I can understand why surgical consultation was considered. Surgical exploration of the liver and common bile duct, and liver biopsy, may be the only way of establishing a diagnosis in some of these infants. The surgeons are usually reluctant, however, to explore infants suffering from active viral hepatitis because such patients usually are poor candidates for anesthesia and have stormy postoperative courses. I believe that surgical exploration would have aided the diagnosis in this particular infant if it could have been carried out.

We now find some events that I'm not sure I can adequately explain. There was a very alarming change in this patient's status within a period of 24 hours. It is possible that this might have been initiated by an aspiration of formula or some similar difficulty. It is also possible that the sudden general failure was further evidence of primary central nervous system disease. In any case, the infant expired within a very short period. I really can't get much helpful information out of this terminal episode.

Now, I should like to go back over some aspects of this case. One factor that I haven't discussed and one that could contribute to jaundice in newborn babies in the absence of any primary liver disease or blood incompatibility such as Rh would be the use of synthetic vitamin K analogues in large doses. We have no information as to whether this baby or his mother received large amounts of vitamin K. Since this was a smaller than normal infant, it is conceivable that too much vitamin K could have been a factor in the development of hyperbilirubinemia. Newborn infants, particularly prematures, receiving inappropriate amounts of vitamin K (more than 25 mg.) may have physiologic jaundice markedly exaggerated and may develop a serious hyperbilirubinemia. This can occur, apparently, because some of the vitamin K analogues or their metabolites can increase hemolysis in neonatal infants.

Turning to the laboratory investigations, we note that the urinalysis is also a key part of the proper approach to an infant such as this. Galactosemia, a genetically transmitted metabolic enzyme defect, could cause hepatosplenomegaly, jaundice, central nervous system damage and failure to thrive in a young infant. You will notice that on repeated examinations no reducing substances were found in the urine. If these were reliable measurements, the absence of reducing substances in urine would, I believe, allow us to exclude galactosemia as the major problem in this infant.

The actual bilirubin values are also important. Returning to the total bilirubin of 12.3 mg. per cent on the third day of life, we find that the direct bilirubin was 1.6 mg. This would indicate that the major component of bilirubin was not conjugated. Such a condition can be found in normal infants and can be explained as a result of immaturity of liver function as regards ability to conjugate bilirubin into its glucuronide—a step that is essential for its excretion in bile. Thus, we have evidence of immaturity of liver function in this infant at birth. We find that the classical evidences of obstructive jaundice appeared at 16 days of age, since there was then an elevation of both direct and indirect levels of bilirubin. Thus, where the early elevation in bilirubin didn't necessarily indicate the existence of liver disease, the findings at 16 days of age do indicate the existence of obstruction and hepatocellular damage. They unfortunately don't provide us with further differential diagnostic information.

The course of the bilirubin during the first few months doesn't offer much help in differentiating causes of jaundice in infants. Babies born with congenital biliary atresia do not present with visible jaundice in the first few weeks. This is understandable when one remembers that the placenta will clear the baby's blood very acceptably of jaundice, so that infants will not be born jaundiced even though they have complete biliary atresia. The typical course for bilirubin levels in the infant with biliary atresia is a progressive and continuous climb during early infancy. These infants don't usually develop levels of bilirubin over 10-15 mg. per cent until about six months of age, however, although there are always exceptions.

The thymol turbidity and cephalin flocculation

tests are of little use in the differential diagnosis of jaundice in the first few months of life. With active viral hepatitis in infants, one may fail to get evidences of positive cephalin flocculation or thymol turbidity tests. Negative results would thus fail to exclude primary viral or other infectious disease in the liver as a cause of jaundice in infants. The sedimentation rate is markedly elevated at 80 days, and this is suggestive of a chronic infectious process.

The purified protein derivative (tuberculin) and histoplasmosis skin tests were negative. I choose to interpret these findings as evidence that we can exclude these latter two diseases. It would be extremely unlikely for tuberculosis to produce the picture that this infant presented, and even less likely that histoplasmosis would explain the findings that we have been given.

The red blood cell fragility was slightly increased, but I am not sure that this is significant.

TABLE 1

LABORATORY STUDIES

	Day of Life							
	3rd	*16th*	*26th*	*35th*	*41st*	*50th*	*56th*	*79th*
Hemoglobin	17 mg. %		13.7	7.5	12.5	10.5	9.8	9.7
White blood cells	4,500			10,500			8,800	13,750
Urinalysis	No wbc's No reducing substances		No reducing substances	8-10 wbc's 15-20 casts			8-10 wbc's 15-20 casts No reducing substances	1-2 wbc's
Serum bilirubin								
Direct	1.6 mg. %	2.3		6.5	5	8.6	7.6	5.5
Total	12.3 mg. %	5.6		7.65	8	11.6	10.1	7.3
Urine bilirubin				Pos.	Pos.	Pos.	Pos.	Pos.
Urobilinogen				Neg.	Neg.	Neg.	Neg.	Neg.
Stool bilirubin				Pos.	Neg.	Neg.	Neg.	Pos.
Thymol turbidity						1.4u		2.0u
Cephalin flocculation								
24-hr.						−		−
48-hr.						+		−
Coombs'	Neg.							Neg.

Eighteth Day of Life

White blood count	12,150	Blood urea nitrogen	19 mg. per cent
Differential	11 segs, 3 eosinophils, 80 lymphocytes, 6 monocytes	Creatinine	1.7 mg. per cent
		Blood sugar	37 mg. per cent
Platelet count	270,000	Total Protein	
Sedimentation rate	7-20-33-48 mm./hr.	Serum	6.1 Gm. per cent
Reticulocyte count	2.0 per cent	Albumin	4.5 Gm. per cent
Skin test		Globulin	1.6 Gm. per cent
Purified protein derivative	48 hr.—negative	Red blood cell fragility	
Histoplasmin	48 hr.—negative	Study	Starts: 0.38 per cent; Ends: beyond 0.26 per cent
Nose culture	Hemolytic staphylococcus aureus sensitive to erythromycin, tetracycline and Chloromycetin, and resistant to penicillin and streptomycin	Control	Starts: 0.42 per cent; Ends: 0.30 per cent
		Transaminase	720 units S-GOT

In infants with obstructive jaundice of many different causes there may be changes in fragility. The hematologic findings do allow us to exclude congenital spherocytosis or a primary hemolytic disease process. The anemia, I would ascribe to the continuing infection. An elevated transaminase is compatible with active liver disease of any cause, and this we already know from other findings.

To sum up, we have an infant born somewhat earlier than normal who presented with immediate respiratory difficulties and central nervous system signs of damage at birth. Jaundice appeared within the first two or three days, and followed the occurrence of evidence of central nervous system damage at birth. There then appeared hepatosplenomegaly, failure to thrive and anemia.

It would seem to me that there are two diseases that would allow us to account for all the findings in this case. In medicine, it is always useful and safest to search for a single explanation for everything. It is certainly possible that this infant had a combination of difficulties such as birth injury and an associated biliary obstruction. I think it most likely that this infant presented a picture due to chronic infection, and I think that congenital biliary atresia is unlikely. In considering etiologic agents capable of causing infection, I would regard bacterial infection as unlikely. Herpetic or viral hepatitis could certainly explain the findings of jaundice, anemia and hepatosplenomegaly, but they would not explain the infant's difficulties immediately at birth. Central nervous system damage at birth would be unlikely in association with these conditions.

We can now again consider cytomegalic inclusion disease. In reviewing instances in which this has occurred, one is struck by the marked frequency with which purpura occurs in infants so afflicted. I noticed no mention in the protocol of either purpura or inclusions in bone marrow or urinary epithelial cells. If indeed there were no such findings, we can exclude cytomegalic inclusion disease.

We are now left with toxoplasmosis, and this would seem to me to offer the best single cause both for the obstructive jaundice and the central nervous system disease. I must admit, however, that viral hepatitis with central nervous system injuries secondary to the liver disease would be equally plausible. The absence of intracranial calcifications or of chlorioretinitis would contraindicate the diagnosis of toxoplasmosis. Both usually occur in infants so infected. There are unusual instances, however, in which neither have been present in the early disseminated form of this disease.

I would thus end with the statement that the best bet for a single explanation of this baby's disease would be toxoplasmosis.

Dr. F. W. Stamler, Pathology: The principal necropsy findings in this case were those pertaining to the liver. As far as the clinical evidence of cerebral disease was concerned, we could find no explanation for it at autopsy. Certainly we found no evidence of such cerebral diseases as toxoplasmosis or cytomegalic inclusion disease, and must assume that any cerebral disease present was not of a type that we could demonstrate by the usual technics.

Also, the exact cause of death wasn't clearly evident. There was a severe degree of liver disease, and I think we should consider this as a death based on hepatic disease. There was evidence of acute upper respiratory infection, and I noticed that staphylococci were cultured. There was some degree of adrenal cortical hypoplasia, which may also have contributed to the child's death.

The anatomical findings of the liver were those of a pathological entity which in recent years has come to be spoken of as giant cell hepatitis of infancy. In this instance, there was no evidence of abnormality of the extra-hepatic bile ducts. They were normally formed and completely patent. There was bile in the gallbladder that could be easily expressed through the duct system through the ampulla of Vater into the duodenum. Also,

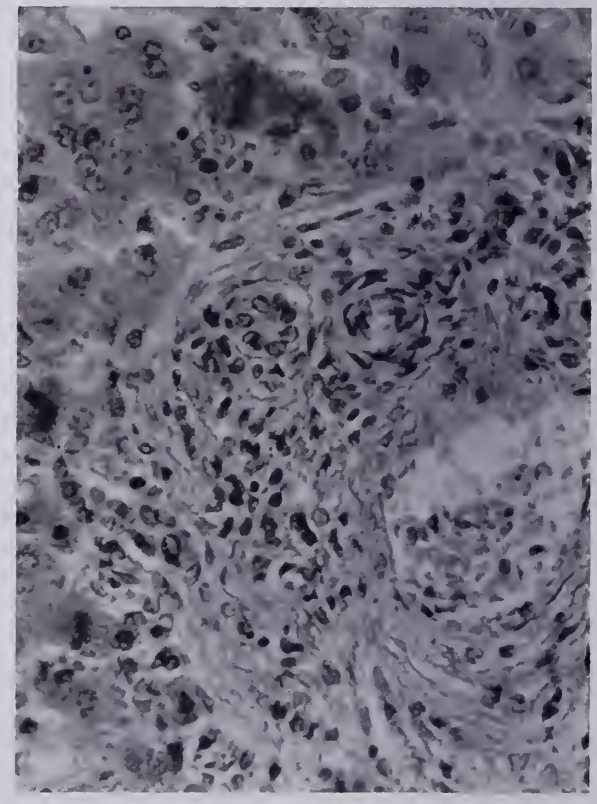


Figure 1. Portal area of liver lobule, with inflammatory tissue surrounding portal triad of bile ductule, hepatic arteriole and portal vein.

there was some apparent bile coloration of the intestinal contents. The liver was slightly larger than normal size. It was of normal configuration, dark and bile-stained in gross appearance, and somewhat firmer than normal.

Microscopically, the liver showed very characteristic findings of the pathological entity that has been referred to as giant cell hepatitis. This, as its name implies, is a condition in which the microscopic structure of the liver is characterized by many multinucleated giant cells. In a typical case, these almost completely replace the normal parenchyma of the liver. The lobular pattern is otherwise normal. The bile system in general is normal, although a small percentage of cases have an associated biliary atresia or other abnormalities of the biliary secreting system. In relation to the giant cell structure of the parenchymal cells, there is virtually complete absence of development of the normal pattern of bile capillaries or canaliculi which normally drain the bile from the hepatic cells to the radicle of the biliary system at the portal triad, and hence through the rest of the biliary system.

The jaundice in these cases is attributed to the lack of normal flow of bile through the liver lobules. Bile is formed, but doesn't find a normal route of exit from the liver lobules through the biliary system. Typically in the cases that survive for any length of time, there is a gradually increasing degeneration of the liver parenchyma, with inflammatory cell infiltration and gradually increasing fibrosis or cirrhosis. Since this child had lived for 80 days or so, there was the beginning of this picture.

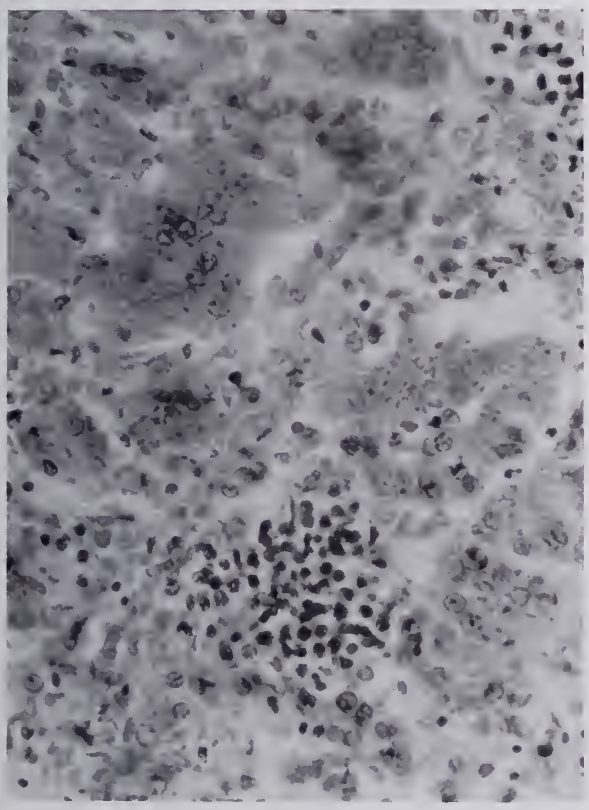


Figure 2. Liver lobule, showing complete disruption of parenchymal cell pattern, with multinucleated giant cells replacing normal liver cells. Scattered foci of hemopoeisis are also present.

Our first slide showed a portion of the liver, with the central area showing one of the portal triads (Figure 1). There was some fibrosis and inflammatory cell infiltrate. At this magnification, one can identify the vein, artery and small bile duct. This is a normal triad with the addition of some proliferating fibrous tissue and inflammatory cells.

The next slide showed the appearance within the lobule, with many giant cells (Figure 2). These are large, irregular syncytial masses containing numerous nuclei. Several foci of hematopoiesis are seen, and persistence of this activity has been stressed in several reports concerning this condition.

The third slide showed a higher magnification of several of these giant syncytial masses (Figure 3). Instead of bile canaliculi, there are numerous small inclusions of bile in each cytoplasmic mass. It is characteristic of this disease that it is almost impossible to find any normally developed canaliculi. Instead, one finds numerous small droplets or masses of bile within the cytoplasm of the cell. The section has been treated with an iron stain to demonstrate that this pigment is not iron, although there was a small amount of iron in some of the cells. There is a little segment of canaliculus that is fairly well developed, but by and large, in conjunction with this very abnormal cellular pattern, there is an almost complete failure of development or disruption of the normal bile capillary system of the liver lobules.

As for the significance of this condition, I might say that this pathological picture was brought into focus in 1952 by Craig and Landing,* who described these findings quite accurately but didn't separate the cases of giant cell hepatitis from virus hepatitis of infancy. Then in 1955, Smetana and Johnson,** at the Armed Forces Institute of Pathology, in reviewing their material separated this group of cases from the ones which they considered as typical of viral hepatitis, and pointed out the differences in appearance. They were the first to emphasize the abnormality or lack of formation of bile canaliculi which is the probable reason for the jaundice in these cases.

They have postulated that this is a congenital

* Craig, J. M., and Landing, B. H.: Form of hepatitis in neonatal period simulating biliary atresia. AMA ARCH. PATH., 54:321-333, (Oct.) 1952.

** Smetana, H. F., and Johnson, F. B.: Neonatal jaundice with giant cell transformation of hepatic parenchyma. AM. J. PATH., 31:747-755, (Jul.-Aug.) 1955.

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malformation of the liver, rather than the result of an infectious process. This idea hasn't been very widely accepted, and others have reported cases of this type of liver disease that were associated with various other conditions such as herpes or other virus infections. It has also been reported in a number of instances of fetal-maternal blood incompatibility of either Rh type or ABO type, and there are those who still feel that it is most likely an unusual type of change associated with virus hepatitis. At present, there is no proof of any specific etiology, and there is no general agreement as to a likely explanation for this pathological entity.

Dr. R. T. Tidrick, Surgery: I saw the baby about the day before he died, and didn't have anything very profound to suggest, but I think it was the general impression of those who saw him that he had hepatitis. I think we have had a very good presentation here, and we have had a lively interest in this subject. I'm sorry that Drs. E. D. Warner and George Zimmerman, and some of the former residents who contributed parts to this study aren't here. Those people reviewed all of the material from the University Hospitals that had come to autopsy and to biopsy with a view to straightening out some of the questions which Dr. Stamler has brought out in his very beautiful presentation.

I think that Dr. Stamler has done a good job of summarizing the very sharply conflicting views that exist today, and I am certain that I can't embellish it. The principal landmark, as he said, was the paper or series of presentations by Craig and Landing which directed attention to this condition or group of related conditions. Whether the conditions can be further broken down is, of course, problematical. However, it is of interest that a man in Scotland, in about 1903 or 1904, postulated the whole train of events from the rather scanty information he had derived from an intensive study of just one case. He made some highly educated guesses. His case came to autopsy with blockage of the bile ducts with inspissated bile, organizing fibrin in the duct systems, and evidence, as he thought, of subsiding or old hepatitis that dated from the time of birth. He pointed out that probably a number of the cases that theretofore had been assigned to congenital aplasia of the intrahepatic and extrahepatic ductal systems were, in fact, obliteration of ductal systems as a result of some type of organizing exudate within the ductal systems. I don't believe that we can improve upon his postulate today.

Whether we are here to become "lumpers" or "splitters," there is an additional point that is worth making. In some of the cases that Drs. Warner and Zimmerman, and others, thought representative of so-called giant cell hepatitis, there was an added substantial reaction around the extrahepatic ducts. The organization of the exudate within the ducts has suggested that this reaction, rather than being due to a congenital anomaly, could be traced to an inflammatory basis. However, it might not be an infective agent in the sense of a virus or a bacterium, but merely the reaction to the bile itself within the ducts. The bile, or some of its constituents, can migrate through the wall after a time. It is seen in macrophages around the wall. In one case in our files, in which a biopsy was performed during life and a complete postmortem was done later, everything suggests that the child was born with a patent ductal system, but that scarring resulted from the bile reaction around the inspissated material in the extrahepatic duct, and the full clinical picture of congenital atresia ensued.

However, we don't yet have very precise ways of differentiating these cases clinically and chemically. There remains much to be done. With our present methods of exploratory surgery, the pathologist, guided by the experience of Drs. Warner and Zimmerman, can secure frozen sections for examination. We believe that these provide a very useful means of evaluating such cases, along with the injection of diluted methylene blue into the ducts and the use of x-ray cholangiography.

Dr. McCrory: Pediatrics occasionally must con-

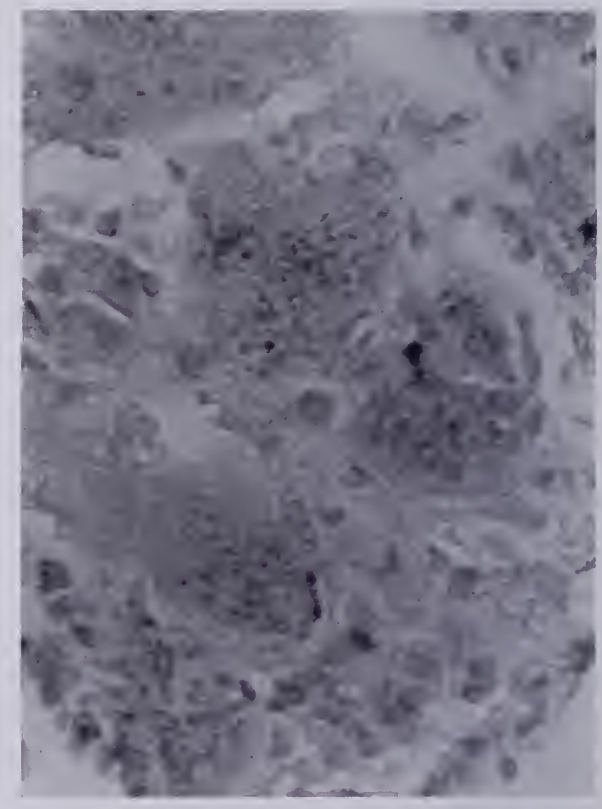


Figure 3. Giant cell hepatitis, with many bile inclusions in cytoplasm of giant cells. A few abortive canaliculi are shown.

cern itself with the question of infection in the parents. Dr. Tidrick brings up another question. He has mentioned infection at birth, and I think it is quite likely that this would actually occur *in utero*. If such were the case, the mother would have been actively infected during her gestational period, and it would be interesting to know whether she had any clinical signs of active hepatitis prior to or following delivery of this infant.

An infant born with the same problem—"giant cell hepatitis"—in Philadelphia was found to have viral hepatitis. Both that infant and that mother were found to be excreting in their stools an agent capable of causing viral hepatitis when taken by human volunteers. That mother, in a subsequent pregnancy, gave birth to another infant so afflicted. If a mother has never had clinical evidence of jaundice, she could still have live virus adjusted to growing in her and would be what we call a carrier. This disease in infants poses the question of whether or not the mother is a carrier of viral hepatitis.

ANATOMICAL DIAGNOSES

Infantile giant cell hepatitis with cirrhosis
Jaundice, moderately severe
Pulmonary congestion and partial collapse, moderate, bilateral
Pulmonary hemorrhage, mild
Acute catarrhal rhinitis
Malnutrition, moderate
Accessory spleen.

Coming Meetings

Out of State

June 1-3	**Physical Medicine and Rehabilitation in Neuromuscular and Medical Conditions.** University of Colorado Medical Center, Denver
June 2-3	**Respiro-cardiac Resuscitation (The American College of Cardiology).** New York City
June 2-4	**Advances in Surgical Anatomy, Normal Anatomy and Histology of the Eye.** University of California, San Francisco
June 2-7	**Seventh Congress, Pan American Medical Women's Alliance.** San Juan, Puerto Rico
June 3	**Surgical Anatomy: Head and Neck.** University of California at Los Angeles
June 4-5	**Medico-legal Aspects of Injuries of Head, Face and Neck.** Biltmore Hotel, Los Angeles
June 4-5	**Surgical Anatomy: Thorax, Abdomen and Pilvis.** University of California at Los Angeles
June 5	**Symposium on Clinical Medicine and Surgery (San Diego County Medical Society and the Medical Department, 11th Naval District).** El Cortez Hotel, San Diego
June 5-8	**Ophthalmology.** University of Colorado Medical Center, Denver
June 6	**Surgical Anatomy: Extremities.** University of California at Los Angeles
June 6-10	**Practical Pediatric Hematology.** Children's Hospital, Philadelphia
June 9-11	**A Course on the Foot.** University of California, San Francisco
June 6-17	**Surgical Technic.** Cook County Graduate School, Chicago
June 6-18	**Histochemistry.** Univ. of Kansas Medical Center, Kansas City
June 6-24	**Forty-Fifth Session, Trudeau School of Tuberculosis and Other Pulmonary Diseases.** Saranac Lake, New York
June 8-10	**Canadian Federation of Biological Societies (Canadian Physiological Society, Pharmacological Society of Canada, Canadian Association of Anatomists, Canadian Biochemical Society).** University of Manitoba, Winnipeg
June 8-12	**American College of Chest Physicians.** Miami Beach
June 9-10	**American Geriatrics Society.** Americana Hotel, Miami Beach
June 9-11	**Endocrine Society.** Eden Roc Hotel, Miami Beach
June 9-12	**American Medical Women's Association.** Shore Club, Miami Beach
June 9-12	**American Therapeutic Society.** Barcelona Hotel, Miami Beach
June 10-12	**American College of Angiology.** Roney Plaza Hotel, Miami Beach
June 10-12	**American Electroencephalographic Society.** Belmont Hotel, Cape Cod, Massachusetts
June 10-12	**Society of Biological Psychiatry.** Hotel Deauville, Miami Beach
June 11	**American Academy of Tuberculosis Physicians.** Miami Beach
June 11	**International Cardiovascular Society, North American Chapter.** di Lido Hotel, Miami Beach
June 11-12	**American Diabetes Association, Inc.** Hotel Deauville, Miami Beach
June 11-12	**Postgraduate Seminar in Arthritis and Related Diseases.** Diplomat Hotel, Hollywood-by-the-Sea, Florida
June 11-16	**American Society of X-Ray Technicians.** Netherland Hilton Hotel, Cincinnati
June 12	**Society for Vascular Surgery.** di Lido Hotel, Miami Beach
June 13-14	**Emotional and Social Aspects of Child Health in Pediatric Practice.** Stanford University School of Medicine, San Francisco
June 12-17	**Association for Research in Ophthalmology, Inc.** Miami
June 12-18	**Ob-Gyn Trainceship.** University of Nebraska College of Medicine, Omaha

June 13-15	**American Neurological Association.** Hotel Statler, Boston
June 13-15	**Society for Investigative Dermatology, Inc.** di Lido Hotel, Miami Beach
June 13-15	**Gynecology for Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
June 13-17	**Annual Meeting, American Medical Association.** Miami Beach
June 13-17	**Canadian Medical Association.** Banff, Alberta
June 13-17	**International Congress of Clinical Pathology.** Madrid, Spain
June 13-17	**International Congress of Physio-Pathology of Animal Reproduction and Artificial Insemination.** Amsterdam, Netherlands
June 15-18	**Idaho State Medical Association.** Sun Valley
June 17-19	**Conference on Research in Emphysema (University of Colorado Medical Center).** Aspen, Colorado
June 19-21	**Maine Medical Association.** Hotel Samoset, Rockland, Maine
June 20-22	**Gallbladder Surgery.** Cook County Graduate School of Medicine. Chicago
June 20-24	**Internal Medicine (American College of Physicians).** Indiana University School of Medicine, Indianapolis
June 20-24	**Advanced Electrocardiography.** Cook County Graduate School of Medicine, Chicago
June 20-24	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
June 20-25	**Seventh Institute on Science in Law Enforcement (Western Reserve University Law-Medicine Center and the Coroner's Office, Cuyahoga County).** Cleveland
June 20-25	**Clinical Hematology.** University of Colorado Medical Center, Denver
June 20-July 1	**Gynecology, Office and Operative.** Cook County Graduate School of Medicine, Chicago
June 21-24	**Northwest Proctologic Society.** Roche Harbour on San Juan Island, Washington
June 22-24	**A Course in Industrial Medicine.** University of California, San Francisco
June 22-25	**Society of Nuclear Medicine.** Estes Park, Colorado
June 23-25	**Surgery of Hernia.** Cook County Graduate School of Medicine, Chicago
June 26-July 2	**American Physical Therapy Association.** Penn-Sheraton Hotel, Pittsburgh
June 27-29	**Obstetrics and Gynecology.** University of Colorado Medical Center, Denver
July 1-2	**Regional Postgraduate Institute (Sacramento Valley Counties in cooperation with UCLA School of Medicine.)** Tahoe Tavern, Lake Tahoe
July 4-15	**International Course in Reconstructive Nasal Surgery (American Rhinologic Society).** Mexico City
July 5-8	**Ophthalmology (University of Colorado Medical Center).** Aspen, Colorado
July 5-9	**Fourth International Goiter Conference (London Thyroid Club, American Goiter Association and the Royal College of Surgeons).** London, England
July 7-8	**Second Annual Oregon Cancer Conference.** Sheraton Hotel, Portland
July 11	**Flying Physicians Association Hawaii Cruise.** Leaving Los Angeles and San Francisco
July 11-13	**Obstetrics and Gynecology.** University of Colorado Medical Center, Denver
July 11-16	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Sheraton-Towers Hotel, Chicago
July 11-22	**General Practice Review.** Cook County Graduate School of Medicine, Chicago
July 14-16	**Dermatology for General Practitioners.** University of Colorado Medical Center, Denver
July 18-22	**Fifth International Medical Conference on Congenital Malformations (The National Foundation).** London, England.
July 18-23	**International Congress of Endocrinology.** Copenhagen, Denmark
July 20-21	**Rocky Mountain Cancer Conference.** Denver-Hilton Hotel, Denver
July 21-23	**Dermatology for General Practitioners.** University of Colorado Medical Center, Denver
July 22	**American Society of Facial Plastic Surgery.** Hotel Elysee, New York City
July 25-29	**Thirteenth International Congress on Occupational Health.** Waldorf-Astoria, New York City
July 31-Aug. 5	**International Congress Against Alcoholism.** Stockholm, Sweden

DERMATOLOGY FOR GENERAL PRACTITIONERS

The University of Colorado Medical Center will conduct a postgraduate course in dermatology for general practitioners in Denver on July 21, 22 and 23. The tuition charge will be $30.

The first day's program will deal with topics of general interest in pediatric dermatitis; the second day's program will take up dermatoses in adults, concluding with a demonstration of common office procedures in dermatology; and the third day's program—actually just a half-day, for it falls on Saturday—will consist of case presentations at the outpatient department of Colorado General Hospital.

On Friday evening, those who attend the postgraduate course will have an opportunity to go to Central City for a production of Donizetti's opera "Lucia Di Lammermoor." Tickets for the opera should be purchased with advance registrations. Seats are priced at $5.75 and $6.75 each.

The course has been accepted for Category I credit by the AAGP on an hour-for-hour basis.

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A Positive Program for Health Care of the Aged

Because doctors of medicine are deeply concerned about the well being of all their fellow men, they want them to receive the types and amounts of health care that they need. Rather than being "against" all plans that are designed to "do something for the old folks," as some people have charged, they are probably more genuinely concerned about the development of a really workable scheme of this sort than anyone else is, for it is they who are most closely connected with health care in all its aspects.

The provision of health care to the aged, in four short months, has become the political issue of the hour. Frantic efforts are being made to design a proposal, or a counter-proposal, that will "solve" the problem through a single legislative enactment, rushed through Congress in the hectic days immediately prior to early-summer adjournment in an election year.

Physicians are correct in regarding this problem as no more susceptible of a "simple" solution than is the so-called "farm problem." They know it would be nothing less than a sheer stroke of luck if any hastily-conceived and ill-considered legislation on this profound subject were to do more good than harm to the voluntary system of medical care that has been serving America abundantly.

Accordingly, doctors ask that proper time be devoted to a thorough study of all aspects of the problem. They will continue to point out defects in specific proposals as they are advanced, but they are interested in solving any and all inequities that do exist in the field of medical care, and they are not limiting their efforts to mere negativism.

THE AMA OFFERS AN EIGHT-POINT PROGRAM

On these pages of last month's JOURNAL, we pointed out some of the doctors' reasons for not wanting health care attached to the Social Security System. Instead of that plan, and instead of the "Eisenhower proposal" that has been advanced even more recently, we should like to set forth the positive eight-point program for improving the health care of the aged that was announced on May 3 by Dr. Louis M. Orr, president of the AMA. Just as the AMA asks that other people do with their schemes, it intends to give a great deal of further thought to this plan, but we think it deserves the serious consideration of all Americans. Here are Dr. Orr's eight points:

"1. *The needy aged.* These aged now receive health care through OAA programs. Here the need is for better organized medical care programs including improved preventive medical care.

"2. *The near-needy.* This is the group whose size is indeterminate, who can meet ordinary costs of living but cannot pay for health care. The AMA supports a state-administered program of federal grants-in-aid to the states for the liberalization of existing OAA programs so that the near-needy could be given health care without having to meet the present rigid requirements for indigency. A liberalized definition as determined locally would permit an expanded program and encompass the near-needy group.

"3. *Facilities.* Better nursing home facilities for the long-term care of the aged person, especially those over the age of 75, are the most urgent

health care need before the nation today. The average age of nursing home patients is 80, and their average duration of stay is two years. It is here that major improvement can be brought about. The AMA supports federal programs for the provision of grants through the Hill-Burton mechanism to provide for new nursing home additions to existing hospitals. For proprietary nursing homes, the AMA supported the recently enacted amendment to the federal housing act providing for government-guaranteed mortgage loans to proprietary nursing homes. The AMA also is cooperating with the American Nursing Home Association and the American Hospital Association in an effort to bring about a rapid improvement in the medical care that is provided in nursing homes.

"4. *Voluntary health insurance.* Health insurance and prepayment policies tailored to meet the needs of the aged for long-term nursing home care must be developed as rapidly as possible. Health insurers, and the Blue Cross and Blue Shield plans across the nation, are already experimenting in this new area of coverage.

"5. *Home nursing care.* Care of the aged patient at home is psychologically, medically and financially desirable. Many programs to promote home nursing care are being developed.

"Homemaker services also provide opportunities for children caring for aged mothers or fathers to continue gainful occupation. They need to be expanded.

"6. *Attitude toward the aged.* A basic change in attitude toward the aged person must be brought about. The person who reaches 65 has not suddenly become non-productive and senescent. On the contrary, most persons over 65 are reasonably well and able to work. Increased productivity by eliminating compulsory retirement and permitting voluntary change of work is an essential part of the answer to the present problem.

"7. *Health education.* Many older persons are unaware of the need for continuing healthful nutrition and other practices that contribute to good health. Above all, the 'will to live' is essential to continuing health. Preventive medical measures instituted long before the age of 65 also can contribute materially to the promotion of good health after age 65.

"8. *The purchasing power of the dollar.* One of the principal economic problems of the aged person in the last 20 years has been the constant and continuing erosion of the purchasing power of his pension benefits. Any government program to help the aged must be anti-inflationary and maintain the purchasing power of fixed pension and annuity benefits.

"Sensible, economical health care programs for the aged that preserve freedom at the same time that they promote security must necessarily be limited to support for the needy aged, and leave to voluntary, competitive private enterprise those activities needed to improve the health care of the rest."

DR. ORR'S FINAL POINT DESERVES SPECIAL EMPHASIS

In urging their fellow Americans to go slow about legislating health care for the aged, physicians are virtually unanimous in underlining the last of Dr. Orr's points. To the casual or unsophisticated observer, it may seem that whatever assistance the federal government might give to the needy and near-needy aged would be sure to improve their economic lot by leaving them more money with which to buy other things. But what if a new health-care program had the direct and immediate effect of raising the prices of all those other commodities and services? In sober truth, that is precisely what would happen.

It is axiomatic that inflation is most severe in its effects on people whose incomes are fixed, and of all the age groups in our society, the elderly are most dependent upon pensions, monthly incomes from annuity policies, and interest from bonds and savings accounts. Thus, inflation hurts old people worst.

All new federal expenditures in the foreseeable future will be inflationary. When a government is on a pay-as-you-go basis, none of its programs have the effect of increasing the supply of money in circulation, since every dollar that it spends has come out of a taxpayer's pocket. But when a government is engaged in deficit financing—and the U. S. budget has shown a deficit in all but two or three of the past 30 years—every new spending program that it undertakes has the effect of increasing the supply of money in circulation and produces a general increase in the cost of living just as surely as would its printing a new batch of paper money. And the severity of the inflation is in direct proportion to the size of the spending program.

Right now, the federal budget is only very precariously balanced. For the fiscal year that will start next month, the administration forecast last January that there would be a $2-4 billion surplus —provided that Congress voted no new appropriations, provided that Congress raised the first-class postage rate to 5c, and provided a number of other things that are certain not to happen. And now that the summit conference has failed and the cold war has taken a turn for the worse, we are certain to begin stepping up our spending for armaments.

In these times, then, a program of federal spending designed to benefit the needy and near-needy aged could easily hurt rather than help such people. Indeed, if there were a consequent inflation at the rate of no more than the three per cent a year that persisted until quite recently, the benefits of such a project would disappear with lightning speed!

In this connection, it is significant that only Point 2 of the AMA proposal would necessitate non-amortizable expenditures at the federal level.

Editorials

THE 1960 ANNUAL MEETING

Attendance at the 1960 Annual Meeting of the Iowa State Medical Society, late in April, was especially large. A larger than usual number of member doctors came, and there were 70 additional doctors of medicine among the 552 persons classified as "guests" in the accompanying tabulation, though much of this year's increase was due to the presence of Iowa athletic coaches who were invited for the programs on sports injuries the first day of the meeting.

The "guests" category also included nurses and the members of the Iowa Society of Medical Technologists, who held their annual meeting at the Veterans Auditorium concurrently with the ISMS.

The scientific program presented at the Annual Meeting was a very fine one, and we want to compliment and thank both the speakers and the program committee members for their respective contributions to it. The scientific exhibitors are likewise to be congratulated, and the technical exhibitors deserve our thanks for their part in making the sessions a success.

Members	805
Guests	552
Coaches	250
Visitors	66
Woman's Auxiliary	170
Technical Exhibitors	249
Total	2,092

WHAT ARE DOCTORS INTERESTED IN?

In years past, the annual meeting of the American College of Physicians has been rather a "fuddy-duddy" type of affair. It has been something that one felt he "must" attend, perhaps every five years, if he were a member. In the past two or three years, however, the tenor of the meeting has become more progressive, and the recent sessions in San Francisco proved to be fascinating and stimulating. The "College" meetings include a variety of familiar features, including color TV exhibitions, panel discussions, hospital clinics, formal lectures and clinical pathologic conferences —all of them "old hat."

In the past two or three years, however, something new has been added. Three parallel sessions have been conducted in the afternoons. Two of them are the familiar "clinical sessions," and the "clinical investigation" lectures. To these have been added the "basic science lectures." At the meeting this spring, such exotic subjects as "Human Genetics," "Fat Metabolism," "Hormones—Metabolism, Submicroscopic Structure" and "Microbiology" were discussed. The fascinating and gratifying aspect of this innovation was that the doctors coming to the meeting were interested in the *fundamentals* of disease processes, and weren't simply seeking to be told which pills to use in a given circumstance.

To carry the analogy to our own state medical meeting, it would seem that perhaps the poor attendance at our scientific sessions (which the program committee has been laboring to alter) may be due to the fact that the topics are pitched too low. Might it not be an interesting experiment, instead of devoting a day to "Athletics," to spring on our audience a day on basic sciences, with topics such as "The Structure of Viruses," "The Origin of Life on Earth," "Gene Structure and Gene Function," and "Lipogenesis and Cholesterologenesis"? Such subjects would at least stimulate members of the State Society to come to the meeting to *learn* something, instead of coming just to meet friends or to play politics. Certainly, it would be worth a try.

NEW TECHNIC IN UROLOGY

Refrigeration of tissues, particularly in the extremities, has long been recognized as a beneficial adjunct in surgical technics. This principle has now been extended to the kidney.

At the meeting of the American Urological Association, at Chicago last month, Dr. A. Cockett, of the University of California Medical School at Los Angeles, reported on the use of a device in connection with the Project Mercury and X-15 space vehicles and capable of producing local kidney hypothermia by means of liquid-to-liquid heat exchange.

The device consists of two kidney-shaped, stainless steel shells with a surgical sponge liner. It is constructed in four sections so that the surgeon may expose any single quarter or a complete side of the organ. A water-alcohol solution is circulated through the device to maintain a temperature between 45 and 65 degrees Fahrenheit. Kidney function, which deteriorates rapidly at normal temperature when the blood supply has been interrupted, can thus be preserved until circulation has been restored. The surgeon is thus confronted with less blood in the area, and may benefit from additional time in which to perform his operative procedure.

It would appear that this device will assist in operations to remove staghorn calculi, to bivalve the kidney, to perform renal vascular surgery or to carry out homo transplants.

CONGRATULATIONS TO ALCOHOLICS ANONYMOUS

At its annual convention next month, in Long Beach, California, Alcoholics Anonymous will mark its twenty-fifth anniversary. It has pioneered quite successfully in a highly important area of social service, and deserves praise from all of us.

The AA approach is a simple one, based on the demonstrable proposition that an alcoholic who has been able to stop drinking has unusually impressive experience to offer the man or woman who is still a slave to liquor. Most AA's do not worry about why alcoholics drink, or how much, or about the trouble that drinking may have caused them in the past. In effect, they tell the newcomer, "We understand your problem because we are alcoholics too. The only difference is that we do not drink any more. We concentrate on staying away from alcohol one day at a time, and that is something the worst drunk can do."

Significantly, two doctors will always be remembered for their contributions to the founding of AA a generation ago. The first was Dr. William D. Silkworth, who for many years prior to his death in 1951 was medical director at Towns Hospital, a well known facility for alcoholics in New York City. In the fall of 1934, he attended Bill W., a once-successful businessman, and after being released from the hospital Bill began, with Dr. Silkworth's encouragement, to work with other alcoholics in New York. None responded to his message, but he found that working with others helped keep him sober. The following spring, Bill went to Akron on a business trip, and though he failed of achieving his commericial purpose, he made the acquaintance of a surgeon, Dr. Robert S., who had lost most of his practice through drinking and who was willing to join in the rehabilitation project. Those three men—two physicians and a layman—were the nucleus of the present 250,000-member AA organization.

Remembering that AA works on a person-to-person basis, one must realize that a 25-year record of growth from three persons to 250,000 is remarkable, but the battle hasn't yet been won. Twenty-five years ago alcoholism was almost universally regarded as the prime evidence of moral weakness, rather than a disease, and the only way in which a doctor could get an alcoholic admitted to a hospital was by calling his ailment by another name. Now, popular attitudes have changed to a certain extent, and both AA members and doctors can help such patients a bit more easily.

Parallel organizations are being formed to help the relatives of alcoholics. The May 16 issue of TIME described "Alateens" (clubs for teenage children of alcoholic fathers or mothers), and "Al-Anons" (similar organizations for alcoholics' wives and close adult relatives). The objectives of the membership of these auxiliary groups are stated in terms that are reminiscent of the AA pledge: "to quit trying to change the things they cannot change—quit trying to make their daddies (or whatever) stop drinking—and to quit fussing and feeling sorry for themselves." TIME reported that there are already 65 chapters of Alateens, with 50 more being organized, and that there are far more chapters of Al-Anons.

ISMS GENERAL PRACTITIONER OF THE YEAR



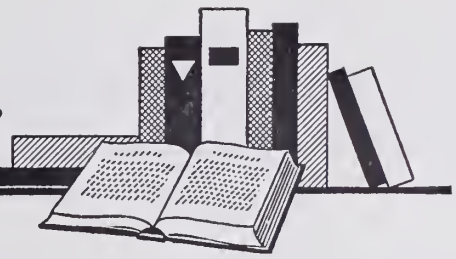
Dr. George H. Keeney, of Mallard, was named the ISMS General Practitioner of the year on April 27, at the final session of the 1960 House of Delegates. He had been nominated for the honor by the Palo Alto County Medical Society.

A native of Warren County, Dr. Keeney earned his way through Drake University and took his M.D. degree there in 1908. He had played football while at Drake, and he coached the sport at Central College, in Pella, while serving as professor of biology there.

Then he moved to Mallard, where for 40 years he practiced medicine in partnership with Dr. E. D. Beatty, until the latter's retirement 10 years ago. Dr. Keeney is now the only doctor practicing in the town.

Despite being busy in medicine, Dr. Keeney found time to serve in the General Assembly of Iowa from 1936 to 1941. He destinguished himself as a lawmaker by writing the homestead tax exemption law and legislation establishing specifications for school busses.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

EPILEPSY AND THE LAW, by *Roscoe L. Barrow* and *Howard D. Fabing*, M.D. (New York, Paul B. Hoeber, Inc., 1960. $5.50).

NINE MONTHS' READING: A MEDICAL GUIDE FOR PREGNANT WOMEN, by *Robert E. Hall*, M.D. (New York, Doubleday & Co., Inc., 1960. $2.95).

SURGICAL ANATOMY OF THE BRONCHOVASCULAR SEGMENTS, by *William E. Bloomer*, M.D., *Averill A. Liebow*, M.D., and *Milton R. Hales*, M.D. (Springfield, Illinois, Charles C Thomas, 1960. $16.50).

WOMEN AND FATIGUE, by *Marion Hilliard*, M.D. (New York, Doubleday & Co., 1960. $2.95).

POLITICS IS YOUR BUSINESS, by *William H. Baumer* and *Donald G. Herzberg*. (New York, The Dial Press, 1960. $3.50).

CLINICAL MANAGEMENT OF BEHAVIOR DISORDERS IN CHILDREN, SECOND EDITION, by *Harry Bakwin*, M.D., and *Ruth Morris Bakwin*, M.D. (Philadelphia, W. B. Saunders Company, 1960, $11.00).

BOOK REVIEWS

DRUGS OF CHOICE, 1960-61, ed. by *Walter Modell*, M.D. (St. Louis, C. V. Mosby Co., 1960. $13.50).

The 1900's have brought with them a volume of scientific articles and of new drugs so tremendous as to overwhelm the poor practicing physician. He is frustrated and bewildered, and the resultant condition is bad for his coronary arteries, so the experts tell us. It is fortunate, then, that two outstanding books are published from time to time, to lessen his bewilderment. CURRENT THERAPY is one of them, DRUGS OF CHOICE is the second, and they complement one another.

CURRENT THERAPY attempts to list all disease conditions and to discuss the treatment of each. Its weakness has been that it hasn't included discussions of the merits of various drugs in the treatment of general conditions. DRUGS OF CHOICE fills that gap. It is a compendium of the thought of experts on *general fields* of therapeutics, instead of on specific disease conditions. There are 42 chapter headings such as "The Choice of a Diuretic" (or antibacterial agent or local antiseptic), and at the back of the book there is a Current Drug Index, giving the trade and scientific names for many of the common drugs that are now available.

DRUGS OF CHOICE is an excellent adjunct to the preservation of sanity in the practitioner of today. In it, experts attempt to clarify in essay form their concepts of therapeutics in their own particular fields of endeavor. By using this book, the practitioner can at least confront the bombardment of medical advertisements and drug salesmen's pitches with sane rebuttals or acquiescences, rather than being swayed like a reed in the wind whenever a new drug appears on the market.

Every therapist must own this book!—*Daniel A. Glomset*, M.D.

SYMPOSIUM ON GLAUCOMA, ed. by *William B. Clark*, M.D. (St. Louis, The C. V. Mosby Company, 1959. $13.50).

This book contains the transactions of the Symposium on Glaucoma held by the New Orleans Ophthalmological Society in 1958. The list of contributors reads like the "Who's Who" of glaucoma. Every aspect of the disease is covered by an expert in that particular field. The book covers the histology, anatomy, physiology and biochemistry, as well as clinical examination and treatment.

There is one chapter on the unusual types of glaucoma such as hypersecretion glaucoma, low-tension glaucoma, glaucoma in the Negro, and glaucoma combined with cataract. One of the best features is the last chapter, occupying 60 pages, which contains a transcript of the roundtable discussion. It takes the form of questions and answers, and thus is very informal, but it is extremely informative.

This is an excellent treatise on a difficult opthalmological problem and it is the type of book that nobody who handles the problem should be without.—*Henry H. Gurau*, M.D.

SYNOPSIS OF EAR, NOSE AND THROAT DISEASES, by *Robert E. Ryan*, M.D., *William C. Thronell*, M.D., and *Hans von Leden*, M.D. (St. Louis, The C. V. Mosby Company, 1959. $6.75).

The authors point out that the purpose of the synopsis is to present a digest of common ailments of the ear, nose and throat area to serve as a handy guide for generalists, students and nurses.

The synopsis is divided into the categories of the ear, the nose and paranasal sinuses, and the pharynx and larynx. Each part was written by one of the authors, and contains a presentation of the anatomy, physiology, common disabilities of the involved region, and treatment of them.

Helpful throughout the synopsis for quick reference are short summaries describing symptoms and treatment of many of the disabilities.

The synopsis is an adjunct to the medical library, and fulfills the purpose for which it was written.—*Chester C. Woodburn, Jr.*, M.D.

Letter to the Editor

THINK!

Sir:

The following article, which appeared in the May 2 issue of AMA NEWS, is the first concrete evidence of the direction in which Iowa Blue Shield may be leading the Iowa State Medical Society, unbeknown to itself.

DOCTORS FIGHT STATE-SET FEES

A vigorous fight is being waged against a bill which would give the Commissioner of Banking and Insurance the power to set fees for physicians participating in the Medical-Surgical Plan of New Jersey (New Jersey Blue Shield).

The Medical Society of New Jersey and the officers and trustees of the Medical-Surgical Plan have sent letters to legislators and state leaders urging the defeat of Assembly Bill No. 556.

Richard I. Nevin, executive director of the medical society, declared:

National Significance: "We feel that there is a principle involved here that is of national significance. We think that if that principle gains establishment, it will

MERIT AWARD WINNERS



The recipients of awards at the annual banquet of the Iowa State Medical Society, on April 26, included, from left to right, Dr. Walter L. Bierring, Des Moines, Mr. W. W. Summerwill, Iowa City, Mr. Otto Pfaff, Fort Dodge, and Mr. Guy Hinkley, Eagle Grove. Dr. Bierring was given a Merit Award "for outstanding contributions to organized medicine"; Mr. Summerwill received the John F. Sanford Award on behalf of his father, Mr. Bes S. Summerwill, a banker who helps to manage the Educational Fund from which money is lent to medical students; and Mr. Pfaff and Mr. Hinkley accepted the Washington Freeman Peck Award made to Friendship Haven Home for the Retired at Fort Dodge.

be applied thereafter throughout the other states."

He asserted that if government possesses and can exercise the right to determine what fees a professional man must accept, then those who are affected "will no longer be free men.

The section of the bill to which M.D.'s specifically object states:

"If the commissioner at any time shall notify the corporation of his disapproval of any rate of payment stated in the plan of payments, as being excessive or inadequate in itself or in relation to other rates of payment, it shall be lawful thereafter for payment to be made at that rate."

Plan Successful: The letters issued by Dr. F. Clyde Bowers, president of the medical society, and Dr. Royal A. Schaaf, president of the Medical-Surgical Plan, pointed out that there has been widespread public acceptance of the plan.

This acceptance, they added, has made Medical-Surgical Plan of New Jersey "one of the most outstandingly successful of the Blue Shield Plans of the nation."

Dr. Schaaf's letter warned that the required participation of at least 51 per cent of physicians licensed to practice in each county may not be maintained if the bill is passed.

"Lack of adequate physician participation," he said, "would inevitably lead to dissolution of the New Jersey Blue Shield Plan."

Could we, as participating physicians, be contributing to a new form of state medicine? What are the possible implications of a state-wide fee survey? How strong do we want an adversary to become before we start taking action? Should we continue our participation in Blue Shield? The news story from the AMA NEWS should make us stop and think!

JOSEPH B. PRIESTLY, M.D.

Des Moines, Iowa
April 4, 1960

USE AND ABUSE OF ANTIBIOTICS

Sir:

I have just received your letter telling me that the printing of the section of your May issue containing my article on "The Use and Abuse of Antibiotics" had already been printed before the arrival of the revisions that I sent you. I am sorry that the proofs reached my office while I was out of town at some meetings, and that the corrections were too late.

Since I made the original speech in Des Moines, I have received several protesting letters from representatives of the meat packing industry. On checking into the matter, I find that my comments were particularly unfair to the packers of beef products. The packers are very sensitive on the point of additives, and I feel sure that they are correct when they say that antibiotics are not administered by them before slaughtering, nor are they applied to the meat. The beef packers properly resent being lumped in the public mind with the application of antibiotics to fish and perhaps to poultry.

The cow is a ruminant, and requires the action of bacteria for proper digestion. The addition of broad spectrum antibiotics to the diet thus has an adverse effect upon weight gain, in contrast to the fattening effect in poultry and pigs. In fact, the addition of penicillin to the diet as a treatment for "bloat" has been regarded as a questionable procedure. The special digestive needs of ruminants probably mean that chronic antibiotic therapy will never be a problem.

The problem is a little different with regard to the administration of antibiotics to cows as a treatment for specific diseases. The detection of measurable antibiotic in milk and the daily experiences of veterinarians indicate that antibiotics are widely used in the treatment of bovine diseases. It is difficult to see the impropriety of this as long as the milk and meat are withheld from sale while they contain antibiotics. It is obviously impossible to police the possibility of clandestine antibiotic administration prior to sale to the meat packers, and the matter is probably being handled as well by the meat packers as it is possible to do.

The problem of the development of antibiotic resistance by massive agricultural use of antibiotics remains, but it is probably true that allergy to antibiotics contained in meat, particularly beef, is not presently a problem.

I feel that I must apologize to your readers for my error, and I hope that you can call this fact to their attention.

Very truly yours,
GEORGE R. FISHER, M.D.

Philadelphia, Pennsylvania
May 5, 1960

Statements published in these columns are not to be taken as reflections of the opinions or attitudes of the editors of the JOURNAL.

NATIONAL FOUNDATION CHANGES POLICY

Heretofore, county chapters of the National Foundation (previously the National Foundation for Infantile Paralysis) have participated financially in providing special-duty nurses for polio patients. Now, Mr. Keith E. Peterson, the state representative of the organization in Des Moines, has asked that county medical societies be informed that payments for this purpose have recently been deleted from the patient-care program by the National Patient Care Advisory Committee.

SCOTT COUNTY SOCIETY RECRUITS MEDICAL STUDENTS

On Tuesday, May 3, at the Outing Club in Davenport, the Scott County Medical Society entertained 50 outstanding high school and college students and their advisers at dinner, in an attempt to encourage the young people to seek careers in medicine. Dr. M. J. Brown, the meeting chairman, pointed out that it was the first occasion of its kind in Iowa, but promised that it would become an annual event.

The students came from Davenport, Bettendorf, North Scott and Assumption High Schools, and St. Ambrose College.

Two associate deans from the SUI College of Medicine spoke on and answered questions about what it means to be a doctor. "We're not here to give you a sales job," Dr. Robert C. Hardin told the young people. "Medicine requires long, demanding study, complete absorption in your work, and a devotion to a way of living. But it offers unlimited opportunities and great challenges. It can be a rewarding—even exciting—life."

Dr. W. W. Morris regretted the use of the term *recruitment* for the medical schools' accelerated talent search. "We're not 'recruiting' for a football team," he protested. "We're just trying to explain what medical school requires, and to eliminate some misunderstandings."

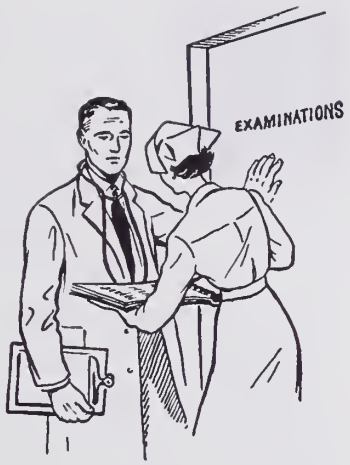
"It costs about $1,750 a year in medical school—that's including tuition, board, room and books. But thanks to loans, grants and other financial assistance programs, we have never lost or turned down anyone because of a lack of money."

Following the presentations by Dr. Hardin and Dr. Morris, there was a question-and-answer period during which doctors and students alike asked questions of the speakers, and the ensuing discussion served to clarify numerous points on the liberal-arts background for medical training, socialized medicine, scholarships and loans, unfounded rumors, etc.



In one group discussion, four doctors talked with three high-school students about medicine at the Scott County Medical Society's first student invitation night, in Davenport May 3. Shown, from left to right, are Society president Dr. C. M. Zukerman; program chairman Dr. M. J. Brown; two associate deans of the S.U.I. College of Medicine, Drs. R. C. Hardin and W. W. Morris; Aleene Pollitz, Davenport; Dale Hamann, North Scott; and Jim Anderson, Assumption.

THE DOCTOR'S BUSINESS



Investment Fund Loading Charges

HOWARD D. BAKER

WATERLOO

The matter of loading charge frequently becomes a prime issue in an investor's decision between an investment fund and individual issues of stock, or between one investment fund and another. We take the position that this charge is not a material consideration in most investment decisions, the only exception being the rare circumstance when performance, management and all other pertinent factors are exactly equal.

In past articles, we have pointed out that investment fund loading charges, in general, are higher than the brokers' fees and incidental costs on the purchase of common stocks. However, one must consider the fact that most funds have no redemption charge (i.e., collect no fee when the individual withdraws from participation), whereas brokers charge fees both for buying and selling stocks and bonds. Moreover, the investment fund participant is likely to retain his shares indefinitely, whereas a high degree of turnover usually occurs in the common stockholder's portfolio over a period of years. These factors must be considered when one compares loading and brokerage charges, and they tend to equalize the costs of fund shares and stocks.

A more common error is an investor's decision to purchase one fund in preference to another solely on the basis of a loading-charge differential. To point out the fallacy involved here, let's see what would have happened if we had invested identical sums in three different funds. We'll use Arthur Wiesenberger's 1959 INVESTMENT COMPANIES as our reference. Let's suppose that on January 1, 1949, we put $10,000 each into the Keystone S-3 Fund, the Equity Fund and the Johnston Mutual Fund. The loading charge for Keystone S-3 is 8.3 per cent, for the Equity Fund it is 3.5 per cent, and for the Johnston Mutual Fund no loading charge is made. Purely on the basis of original cost, Johnston Mutual Fund would have seemed the best buy. However, let's carry our comparison further and see whether it would have been preferable at the end of the succeeding 10 years.

From the tabulation shown below, it is apparent that our gain on the Keystone S-3 investment would have been $25,425 greater than the gain on our investment in Johnston Mutual, despite Keystone's loading charge. For this very obvious reason, we advise that performance and management ability should be your basis for choosing a fund, and that you should ignore the loading charge completely, unless performance, management and all other factors other than loading charge are exactly equal. Then only will this charge be a deciding factor in a purchase decision.

	Keystone S-3	*Equity Fund*	*Johnston Mutual*
Purchase, 1-1-'49	$10,000	$10,000	$10,000
Less loading charge	830	350	—
Net purchase value	$ 9,170	$ 9,650	$10,000
Asset value 1-1-'59	57,375	41,826	32,780
Ten-year increase over purchase value	$48,205	$32,176	$22,780

The performance data on the funds presented here is net performance, after absorption of all loading charges, and in no case in that comparison would loading charge alone constitute a valid basis for choosing one fund over another. Perhaps it should be emphasized, however, that nothing that has been said here is intended as an endorsement of Keystone S-3 shares. Various mutual funds have different objectives, and in consequence have widely differing portfolios. Keystone S-3, which specializes in "growth stocks," did beautifully in the bull market of the last 10 years, but it might not outperform the averages during the coming decade.

It has been my intention to emphasize the principle that performance and management must necessarily be given far greater importance than is accorded to acquisition and selling costs.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Iowa Chapter of the American Academy of General Practice

SPRING POSTGRADUATE CONFERENCE

The Iowa Chapter of the American Academy of General Practice will present a postgraduate conference on June 13, 14 and 15 at New Inn, on Lake Okoboji. This meeting will be unique in that all scientific lectures will be held from 9:00 a.m. to 1:30 p.m. daily, leaving the remainder of each day for relaxation and enjoyment. The program was planned in this manner in the hope that physicians and their families could enjoy education and relaxation together. Two years ago at a spring postgraduate conference held at Spirit Lake, those in attendance expressed a desire to have this type of meeting.

The recreation facilities are for all members of the family. They include golf on the putting range, on the driving range or on the nine-hole course. All courses are lighted for night play. For the aqua enthusiast, there are boating and fishing, and swimming in the heated pool or in the lake. Horseback riding will be available for would-be equestrians, and there will be shuffleboard, miniature golf, bingo and card games for those who desire to be less active. These recreational facilities are all at the disposal of guests at the New Inn.

Accommodations at the New Inn can be secured to suit the doctors' needs, from singles to family units. Please review the March-April issue of HAWKEYE GP NEWS for details on the lay-out and the rate schedules. The hotel is on the American plan, according to which there are combined rates for room accommodations and meals, including breakfast, lunch and dinner. Those who do not stay at the New Inn can buy tickets for the meals they wish to eat there.

The Iowa Chapter is indebted to the Iowa Heart Association for the scientific program that is to be presented on Monday, June 13, and there will be no registration fee for that day. On Tuesday and Wednesday, there will be a registration fee of $5 per day for physicians who are not members of the American Academy of General Practice. We welcome all physicians to this meeting.

The following is the scientific program:

Monday, June 13

"Treatment of Cardiovascular Emergencies"—Arthur W. Horsley, M.D., Iowa City

"Use of Diuretic Agents"—Mark L. Armstrong, M.D., Iowa City

"Selection of Patients for Cardiac Surgery"—June M. Fisher, M.D., Iowa City

"Cardiac Arrhythmias"—E. O. Theilen, M.D., Iowa City

"Problems in Management of Patients With Myocardial Infarction"—R. L. Grissom, M.D., Omaha, Nebraska

PANEL DISCUSSION: "What's New in Cardiovascular Disease" (All speakers listed above), Moderator, Dr. Armstrong

Tuesday, June 14

"Inguinal Hernia"—Chester B. McVay, M.D., Vermillion, South Dakota

"Office Treatment of Anorectal Lesions"—Markham J. Anderson, M.D., Rochester, Minnesota

"Management of Spontaneous Pneumothorax"—Harry McCarthy, M.D., Omaha, Nebraska

"Benign and Malignant Lesions of the Skin"—Richard Q. Crotty, M.D., Omaha, Nebraska

"Repair of Facial Lacerations"—Albert S. Black, Jr., M.D., Omaha, Nebraska

Wednesday, June 15

"Functional Uterine Bleeding"—Wm. E. Keettel, M.D., Iowa City

"The Positive Papanicolaou Smear"—Leo T. Heywood, M.D., Omaha, Nebraska

"Fractures in Children"—Carroll B. Larson, M.D., Iowa City

"The Diagnosis of Growth Failure Due to Renal Disease"—Wallace W. McCrory, M.D., Iowa City

"The Use of X-rays: A Practical Guide to Avoid Possible Hazards"— Harry W. Fischer, M.D., Iowa City

Academy members can earn 11½ hours of Category I credit for attending the entire session.

Please make your accommodation reservations direct with the management of the New Inn, Okoboji, Iowa. The excellent scientific program plus the recreational facilities will make this tops for a spring conference. Plan to arrive and register on Sunday, June 12, and enjoy the buffet dinner that will be served that evening.

TREATMENT OF THE ADULT TUBERCULIN CONVERTER

A Statement of the Committee on Therapy of the American Trudeau Society

During the first few years of the past decade there was at first a cautious and then a very rapid broadening of the indications for specific antimicrobial therapy for tuberculosis. This led to the current consensus that such therapy should be included in the treatment of all forms of active tuberculosis. More recently the indications have been further broadened to include certain persons who have no evidence of tuberculosis other than positive tuberculin reaction.* There would appear to be more than adequate justification for the now widespread use of antimicrobial therapy in infants with positive tuberculin reactions in view of the incidence and serious nature of the complications of tuberculosis at this age. Reports of studies designed to establish the place for antimicrobial therapy in the adult tuberculin converter are not yet available, and those dealing with children are preliminary in that they pertain only to early observations.[1] Nevertheless, it seems appropriate to consider the matter of the treatment of the adult tuberculin converter in the light of the information available.

Tuberculin conversion as used in this statement indicates the appearance of hypersensitivity to tuberculin in an individual known to have been a nonreactor in the recent past. Every individual in whom tuberculin hypersensitivity appears should be studied—by means of a complete medical history and physical examination, a roentgenogram of the chest, and cultures of three specimens of sputum or gastric contents—for evidence of a clinical infection. If such studies reveal other evidence of tuberculosis, appropriate treatment should be instituted. This statement will deal with those in whom the only evidence of tuberculous infection is recent tuberculin conversion.

The appearance of a positive tuberculin reaction at any age indicates a tuberculous infection that may or may not result in clinical tuberculosis. Before concluding, however, that a recent tuberculin conversion is an indication for antimicrobial therapy, the physician must determine (1) the risk to the individual without antimicrobial therapy; (2) the effect of therapy on this risk; and (3) the undesirable effects of the therapy.

The reported morbidity, both early and late, in the adult known to have converted the tuberculin reaction from negative to positive varies widely. Myers and others[2] reported the development of other manifestations of tuberculosis in about 5 per cent of a group of student nurses who were known tuberculin converters and who were followed for periods of four to 28 years. Many of these had "primary pulmonary infiltrates" and pleural effusions without subsequent tuberculous developments. At the other extreme, Hyge[3] found tuberculosis in some form in 60 per cent of a group of adolescent students followed for 12 years after converting the tuberculin reaction as a result of a classroom exposure. There have been many other reports[4-12] dealing with such observations, and most of these would suggest that the risk of developing tuberculosis following conversion of the tuberculin reaction is between 5 and 15 per cent, with even higher figures in some groups. The reasons for these wide variations are not entirely clear. Differences in selection of cases and techniques of follow-up observation may account for some of these variations, and it seems likely that the nature and frequency of exposure and the susceptibility of the individuals to tuberculosis would account for some of these differences.

Very little information is available about the effect of antimicrobial therapy on morbidity following conversion of the tuberculin test. There is evidence that the administration of antimicrobials to tuberculin-positive children[1] and to patients with tuberculous pleural effusion[13, 14] very significantly alters the ultimate prognosis and markedly lowers the incidence of complications. This difference is most marked in those cases in which isoniazid is included in the therapeutic program. From these facts and from the vast experience with chemotherapy of established tuberculosis, it seems reasonable to expect that the institution of antituberculous drugs following conversion of the tuberculin test would significantly reduce the incidence of tuberculous disease. This is not to say that the risk would be altogether eliminated.

The incidence and type of drug toxicity would depend on the therapeutic agent used, but this should rarely amount to a serious problem. Regardless of the choice of drugs, the mere fact that treatment is advised might produce some anxiety on the part of the patient and his family; if the situation is properly handled by the physician, and the reasons for recommending therapy are carefully explained, anxiety would not appear to be of major importance.

There is insufficient evidence available at the present time to allow any definite or final conclusions about the use of antimicrobial drugs in adult tuberculin converters. Nevertheless, in the light of the above considerations, one can justify this form of therapy in known recent converters. The indications for such a course of action are even more definite in the following converters: (1) those who for some reason are thought to be unusually susceptible to tuberculosis, such as adolescents and persons with diabetes or silicosis; (2) those known to have had unusually heavy or prolonged exposures to tuberculosis; and (3) others in whom unusual circumstances would in-

Reprinted from the AMERICAN REVIEW OF RESPIRATORY DISEASES, 81:443-445, (Mar.) 1960.

* As defined by the Committee on Tuberculosis in Children of the American Trudeau Society.

dicate every precaution in preventing clinical tuberculosis.

The absence of careful and controlled comparative clinical studies also precludes final statements regarding the proper choice of drugs in the cases in which treatment seems indicated. In the treatment of established tuberculosis it remains the opinion of most that multiple-drug therapy offers real advantage over therapy with a single drug (isoniazid), especially in advanced pulmonary disease and in most extrapulmonary disease. For this reason multiple-drug therapy in the tuberculin converter might be expected to afford maximal assurance of preventing clinical tuberculosis. If two drugs are used in such cases, isoniazid and PAS are suggested as the combination of choice. Since there is some evidence that, in the early months at least, isoniazid alone compares favorably with isoniazid and PAS in the treatment of minimal and moderately advanced pulmonary tuberculosis without cavities,[15] the use of this single drug in the recent tuberculin converter might be a satisfactory alternative therapeutic regimen. The use of isoniazid alone is convenient, inexpensive and relatively free from toxic side effects. Including PAS in the treatment would make for less convenience, greater expense and greater incidence of side effects that could be expected to increase the interruptions in the program and the chances of discontinuing both drugs prior to completion of the prescribed course. The physician in charge must balance the advantages and the disadvantages of giving PAS plus isoniazid rather than isoniazid alone, but whatever the choice of drugs, it is recommended that treatment be continued without interruption for a period of at least one year on an ambulatory basis.

The decision to use antimicrobial therapy in the recent tuberculin converter does not lessen the importance of close observation of the individual being treated. In addition to the necessary examinations to detect manifestations of tuberculosis, such persons must be observed for evidence of drug toxicity. The development of a positive tuberculin reaction, especially in someone not known to be in contact with tuberculosis, should be followed up with careful examination of family and close contacts to discover, if possible, the source of the infection.

The use of antimicrobial agents in the case of a recent tuberculin converter is designed as a measure to prevent clinical tuberculosis, and does not mean that the patient has a disabling disease. When a hospital employee develops a positive tuberculin reaction, the matter of reporting this to industrial accident commissions should be based on general policies applying to tuberculin converters and should not be affected by the fact that therapy has begun.

It should be reemphasized that the place for antimicrobial therapy in the management of the recent tuberculin converter is not yet finally established. Careful, controlled clinical studies should be carried out in an effort to establish more firmly the advantages of such therapy.

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BLUE SHIELD ANNUAL MEETING

The annual meeting of participating physicians of Iowa Medical Service (Blue Shield) will be held July 24, 1960. At that meeting, directors are to be elected from Districts 2, 5, 8 and 11. There are also vacancies in the directors-at-large, the number to be determined by the Board of Directors after receipt of nominations and petitions.

Nominations to the Board of Directors are made by a liaison committee composed of six member physicians. That committee shall report nominations in time for the Board to prepare a ballot not less than 30 days before the annual meeting. Participating physicians are encouraged to transmit their suggestions regarding nominations to the liaison committee.

The by-laws of Blue Shield contain a procedure for nomination by petition, also.

After nominations have been made, a ballot is sent to each participating physician not more than 20 nor less than 10 days before the annual meeting. Proxy voting is not permitted, but members may vote by mail. Only the members who live in a particular district can vote for candidates for representative of that district, but all members are eligible to vote for representatives at large.

STATE DEPARTMENT OF HEALTH

Edward D. Zimmer
COMMISSIONER

MORBIDITY REPORT FOR MONTH OF APRIL, 1960

Diseases	*1960 Apr.*	*1960 Mar.*	*1959 Apr.*	*Most Cases Reported From These Counties*
Diphtheria	0	0	0	
Scarlet fever	481	376	396	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	320	166	2,014	Clinton, Des Moines, Linn, Pottawattamie
Whooping cough	10	10	48	Des Moines, Polk
Brucellosis	53	22	27	Dubuque, Scott
Chickenpox	830	516	851	Dubuque, Linn, Polk, Pottawattamie
Meningococcic meningitis	0	1	1	
Mumps	655	461	262	Linn, Polk, Pottawattamie, Scott, Story
Poliomyelitis	0	0	0	
Infectious hepatitis	56	54	7	Scott, Wayne, Woodbury
Rabies in animals	12	12	26	Howard, Mitchell, Poweshiek
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	44	66	29	For the state
Syphilis	90	84	137	For the state
Gonorrhea	120	100	101	For the state
Histoplasmosis	0	1	0	
Food intoxication	3	0	0	Des Moines
Meningitis (type unspecified)	2	2	1	Polk, Story
Diphtheria carrier	0	0	0	
Aseptic meningitis	0	0	1	
Salmonellosis	1	0	4	Hardin
Tetanus	0	0	0	
Chanchroid	0	0	0	
Encephalitis (type unspecified)	0	0	1	
H. influenzal meningitis	0	1	0	
Amebiasis	1	0	1	Adair
Shigellosis	2	3	1	Calhoun
Influenza	220	902	29	Polk

COXSACKIE AND ECHO INFECTIONS ARE REPORTABLE

At the request of the State Department of Health, the State Board of Health, at its meeting on January 12, 1960, recommended that Coxsackie and ECHO infections in Iowa be made reportable to the State Department of Health.

If known or suspected, it is necessary that these infections be reported. They occur in greatest numbers during the season of highest incidence of poliomyelitis. Their symptoms are frequently quite similar to the early symptoms of non-paralytic poliomyelitis, and for that reason they definitely add confusion to the poliomyelitis picture, especially at a time when the incidence of paralytic poliomyelitis has been definitely decreased by large numbers of immunizations. It will be remembered that during the past few years Iowa has had many large and small outbreaks of these infections. In 1955, ECHO 4 infection occurred in a large-scale outbreak in Marshall County. The Iowa study was the first really complete and detailed study of this infection. Although the organism had previously been known, no definite illness had been associated with it.

In 1956, a large outbreak of Coxsackie infection occurred in the state. Cases first appeared in Polk County, and later there were ones throughout the north-central area including Fort Dodge and Mason City. There was a later extension of the outbreak to include the Waterloo and Dubuque areas. Again, one of the first complete studies of this type of infection, Coxsackie B5, was the Mason City, Iowa, study. We have isolated various of the Coxsackie types since that time in other areas of the state, but have found no such large-scale outbreaks.

Our interest in surveillance of these infections must continue. The work will be helped materially by reports of these infections.

SCHOOL IMMUNIZATION SURVEY, WEBSTER COUNTY—MARCH, 1960

The accompanying summary of a school immunization survey was prepared by seven Webster County nurses (two county public health nurses, three Fort Dodge school nurses, and two Fort Dodge or "community" nurses), with the approval of the Fort Dodge city superintendent of schools and the Fort Dodge school physician, who is also president of the Webster County Medical Society.

This county summary is a grand tabulation from the 20 schools within Fort Dodge and the 21 located in the remainder of Webster County. Similar summaries are available locally for each of the schools. It is based on reports received in questionnaires returned by parents of 10,281 of the 11,148 pupils.

As is usual in school immunization, it is evident that interest and activity decreased as the pupils approached senior high school. Overall, however, the record is good as regards initial immunizations. Ninety-two per cent of all pupils participated in the survey, and about 80 per cent of them are shown to have completed initial immunizations (DPT or DT, smallpox and at least

Grade	*K*	*1st*	*2nd*	*3rd*	*4th*	*5th*	*6th*	*7th*	*8th*	*9th*	*10th*	*11th*	*12th*	*Tot.*
Total number forms sent out	1,029	1,108	1,094	1,062	1,014	921	884	907	764	670	626	608	531	11,148
Total number forms returned	935	1,028	1,038	1,003	983	862	841	820	700	576	548	510	437	10,281
Percentage of forms returned	90.87	72.78	94.88	94.35	96.84	93.70	95.05	90.41	91.63	45.94	87.54	83.88	82.30	92.23
Per cent having had initial DPT or DT immuniz.	85.24	83.28	81.12	78.45	81.06	82.83	82.79	82.81	80.86	77.61	62.77	82.55	83.30	80
Per cent having had initial smallpox vaccination	81.07	78.21	77.07	72.26	76.48	77.84	79.45	82.56	82.86	81.94	84.67	80.39	85.58	79.53
Per cent having had initial or booster DPT or DT within last 5 years	62.57	52.04	46.78	51.26	48.78	34.57	24.03	10.38	14.14	15.45	22.81	6.27	8.7	35.36
Per cent having had initial or booster smallpox with last 5 years	58.61	46.59	38.88	35.13	38.19	29.57	23.08	7.56	8	8.68	4.56	4.71	5.72	27.76
Per cent having had 4 poliomyelitis immuniz.	69.09	64.01	62.64	55.89	62.63	56.38	60.69	64.27	50.71	52.26	52.19	29.41	43.48	58.78
Per cent having had 3 poliomyelitis immuniz.	17.12	17.70	25.77	20.36	22.30	24.94	0.13	22.68	28	26.67	23.18	84.71	95.42	27.88
Per cent having had 2 poliomyelitis immuniz.	3.72	3.11	4.92	5.41	6.01	3.25	3	4.76	6.43	7.99	8.94	49.02	54.69	9.34
Per cent having had 1 poliomyelitis immuniz.	2.67	1.26	2.87	1.60	1.53	58	0.84	0.73	1	2.09	2.01	0.98	1.37	1.54
Per cent having had no poliomyelitis immuniz.	6.10	8.13	5.59	10.33	8.15	6.03	3	5.61	12.57	10.42	12.04	13.14	14.65	8.51
Number still in process of receiving poliomyelitis immuniz.	45	59	46	44	45	24	15	10	33	22	29	14	21	427

three poliomyelitis vaccine injections). Repeat or booster immunizations had been given to a small percentage of them recently enough to be considered still effective.

Tuberculin tests might well have been included in the summary, for though they are not immunizations, they are definitely a means of locating and controlling tuberculosis.

Such a grand summary as this cannot show pockets or areas of low immunization in an individual school or area within the county. Such areas—and some do exist—can be picked up from the individual school summary sheets.

Health workers know the value of keeping immunizations at good protective levels. They know, too, that school immunizations are usually good indices of the numbers of preschool children who have been immunized. Now that individual summaries are available to them in Webster County by school and by grade, these workers now know where to direct individual efforts at promoting better immunizations. Over 1,000 youngsters are being prepared to enter kindergarten in Webster County this coming fall, and this information can immediately be put to good use.

GAMMA GLOBULIN DISTRIBUTION POLICIES

The American Red Cross supplies state departments of health with gamma globulin for distribution under policies set up by the individual state departments of health.

In Iowa, distribution is directly to physicians who have written or telephoned the State Department of Health or the health offices in their regions of the state. Iowa's policy, with which most physicians of the state are already familiar, will continue unchanged. The factor that actually determines the policy is that only very limited amounts of gamma globulin are available. The Red Cross sends the material to all states on a per capita basis. Officials of the organization tell us that the amount that can be produced is determined by two factors—the amount of outdated or otherwise unused blood available from the 54 Red Cross Regional Blood Centers, and the funds that are available for fractionating the blood. Thus, the amount of gamma globulin that is actually produced is directly influenced by the financial support the American public gives to the Red Cross. We are anxious for the physicians and lay people of Iowa to know the role that the Red Cross is playing in making gamma globulin available, and the problems that the organization is facing as it endeavors to continue the program.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529 Thirty-sixth Street, Des Moines 12.

WHOOPING COUGH REMAINS A THREAT TO INFANTS

Whooping cough remains second to bronchopneumonia as the most significant infectious disease of infancy, Drs. Stephen Kaufman and Henry B. Bruyn, of San Francisco, reminded physicians in the April, 1960, issue of the AMA JOURNAL OF DISEASES IN CHILDREN.

They said that a study of the 199 patients with whooping cough who were admitted to San Francisco General Hospital during a 10-year period showed that child-to-child contact within the home was the most important means by which the disease is spread. Thirty-eight per cent of the patients were under six months of age, and 57 per cent were under one year. Almost half of them had contracted the disease from another child.

The newborn can best be protected by adequate primary immunization, or by booster inoculation of other children in the family before the baby arrives, they said. The usual method of immunization consists of three shots one month apart beginning at one to two months of age. "This type of immunization will prevent the disease or mitigate its severity," they declared.

According to these two doctors, "Whooping cough still is a significant and dangerous disease causing more deaths in the first year of life than measles, scarlet fever, diphtheria and poliomyelitis combined."

NEARLY HALF OF AMERICANS HAVE HAD NO POLIO SHOTS

New estimates, released by USPHS on May 8, showed that over 91,000,000 persons have now had one or more shots of polio vaccine, and 72,000,000 of them have had the three or more shots required for complete vaccination. Thus 40 per cent of the population now has maximum protection against poliomyelitis, and 11 per cent of the people have been partially vaccinated, with one or two injections. *But 49 per cent have had no vaccine at all!*

"It is among these 49 per cent that paralytic polio will take its heaviest toll this summer," warned Dr. John D. Porterfield, acting surgeon general of USPHS.

Among children under five years of age, who accounted for 43 per cent of all paralytic polio cases last year, there still are 8,500,000 (42 per cent) who have had fewer than the three or more required shots. Nineteen per cent of youngsters in this age group have had no vaccine at all.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

It's really nice to have a little place all for yourself, where you can take your time and spin a yarn, give advice or just let yourself go. This month I shall talk about our state convention in retrospect. Obviously, its chief ingredient was people, and this report would be significant if it were just a list of names. I could list the names of those I met each day, writing each name slowly and deliberately while I recalled conversation, attire, arguments and laughter. Each of my readers could call similar memories to mind, and thus much of the long list would be adequate and meaningful.

The obvious handicap for my readers would be the order of enumeration, for they weren't with me at all times, they didn't see or touch all of the same people or walk the same paths that I walked. So, as though reviewing a book or a movie that my readers may have missed, I must discuss, describe and even debate those days. Fortunately for my patient readers, I shall censor parts of my reminiscences, since they are my concern alone.

Anyone who registered or ventured into the meetings must have detected the enthusiasm of the convention committee, which consisted of Mrs. J. T. Bakody and her assistants, Mrs. Louis Goldberg and Mrs. F. C. Coleman. Their spirit seemed to permeate the convention. I think that every Auxiliary member's enjoyment of the 1960 annual convention was in direct proportion to her participation. For me it was a real example of getting out of a thing exactly what one has put into it. I received at least as much as I gave. How did you fare?

For the sake of brevity, here is a tantalizing, incomplete list of some things that transpired.

1. Mrs. Gastineau, our national president, was there to greet and extend a hand of friendship to members of Iowa Auxiliaries. I could write a small essay on this event alone. She is precious!

2. Mrs. Priebe, Mrs. America, was there. She is lovely to behold, speaks very easily, has sound movies of her experiences, and leaves one inspired to improve her own mind, soul and body.

3. The Auxiliary Legislative Committee was there in action. An authority described it as the finest in the country. Go to your yearbook if you don't know the names of the committee members.

4. A new record was made in donations to AMEF.

5. The county presidents' reports were extremely stimulating and well presented.

6. Dr. O. D. Wolfe, a trustee of the Iowa State Medical Society, gave us an insight into the changing image of the doctor.

7. Candles and an impressive memorial service reminded us that this past year took 11 of our members by death.

If I were to name names on state committees, there would be no stopping place. Suffice it to say that I pity those of you who still haven't made personal acquaintances of these state board members.

Length necessitates halting here. There were those loved members we missed. Some of the fine women who in the past have breathed life into the Auxiliary have left parts of themselves in the organization, but when the meetings begin and end without our seeing them, we are saddened. I can't mention all of them, but one whom I must name is Mrs. Ralph Moe. We surely thought of "Millie," and missed her counsel and company.

We delved into business, sentimentalities, information and fun. The blend was nearly perfect. Don't you agree?

MRS. R. F. NIELSEN

MUST WE BUY NOW AND LOOK LATER?

On April 24, the NEW YORK TIMES reported: "The issue of medical care for the aged has had a heavy impact on the current session of Congress. Liberal Democrats took the initiative by championing a measure drafted by Representative Aime Forand that would provide Social Security beneficiaries with medical care by increasing Social Security taxes. The present administration initially opposed any Federal action on the matter on the ground that it would be a step toward 'socialized medicine,' but it has been under pressure to act, lest the Democrats make strong political capital out of the issue."

Because it is an election year, are we going to be agreeable to assuming a long-term and very heavy tax burden? To date, no comprehensive study of the needs of our older citizens has been made. The White House Conference on Problems of the Aging is not scheduled until January, 1961.

Is it good business to buy now and examine our purchase later? The decision is yours, but the time is now!

JANET ELLIS, *chairman*
Legislative Committee

INAUGURAL ADDRESS

MRS. R. F. NIELSEN
PRESIDENT

A first comment on such an occasion could be a trite although sincere remark: "I am very proud to accept this honor." But then, suddenly and almost before one has finished the sentence, an inner voice whispers: "Pride goeth before a fall."

While we are recalling adages, perhaps I should mention this one: "Blessed is the man who appreciates his own time too highly to waste another's." As for inaugural promises, I resolve to be the third best president this organization has ever elected. We all know who is our very finest past president. Then, there is a mad scramble for second-best—and in third place, Nielsen.

Many of us think of the Woman's Auxiliary to the Iowa State Medical Society as being a solid structure to shelter all of us. Recognition is often given to the many fine women who laid the cornerstone, built the solid foundation and worked at completing the structure itself. As is characteristic of all construction work, during some years the progress is actually slow, sometimes it just seems slow, and at other times the pace is very rapid.

Today, the Auxiliary seems best described as a mobile unit. Our founders set wheels in motion, and soon we owned a complete vehicle similar to a large bus. Now, we have grown so much that we need a fleet of cars—some compacts, some standards and some buses. For Revisions, Doctors' Day, BULLETIN subscriptions and other similar kinds of services, the road is straight and a driver in a compact car does the job. Safety, Mental Health, Civil Defense and others need larger vehicles, but again the way is fairly direct and well marked. The area covered by our Legislative Committee is travelled in an effort to avoid invasion. A maze of roads must be travelled to accomplish this. Many far-sighted and loyal Americans are helping us in this struggle. The road we are travelling now, under the able command of Jane King and Janet Ellis, is infiltrated by socialist forces. The trip is over rough roads and around many curves. No one can predict when the enemies of free medical practice will be destroyed.

Someone has to coordinate this fleet of vehicles. Someone has to man the vehicles, and someone has to be in the back seat encouraging and helping the drivers.

All of us have to support this united effort physically and financially. Each single person can accomplish little alone. A chain is only as strong as its weakest link. Our entire organization, however, is capable of achievements far beyond our expectations.

The "ride" is fun—but it is also hard work. Whether you or I like it or not, 1960-61 will find me coordinator of our Auxiliary fleet. In that capacity, I shall endeavor to be worthy of your trust.

We know that:
Coming together is a *beginning*
Keeping together is *progress*
Working together is *success.*

SNATCHES FROM MRS. VANCE'S TALK

The Tuesday luncheon speaker, at our Annual Meeting, was Mrs. Verne W. Vance, of Omaha, and her topic was "How to Stay Alive as Long as You Live." Here are some of the memorable things she said:

"There is no way to keep from being old if you are going to live long."

"Getting old is a tragedy. Growing old is fun."

"Interests or ailments—you still have time to choose."

"Yesterday is a cancelled check."

"There are three critical periods—

1. About 30—If you rest on your oars, it is harder to begin rowing again.

2. Kids leave home.—They have helped to keep us young.

3. Time of retirement—Boredom is the curse of the 20th Century, and would be embarrassing to think anyone might have grounds for saying you died of it."

"As Jonathan Swift aptly put it, 'May you live all the days of your life.' "

"You are only as young as your
Physical senses
Words
Habits of learning (A learner reaches out for life wherever he is. He includes instead of excludes. He wants new experiences.)
Ability to break routine
Willingness to climb out on a limb—to take risks
Enthusiasm for life."

HEALTH EDUCATIONAL LOAN FUND

Every Auxiliary member should bear in mind that high school graduates who are interested in paramedical careers can look to the Woman's Auxiliary to the Iowa State Medical Society for financial aid. Won't you please help spread the word in your area?

It must be emphasized that the organization does not offer scholarships. Yet the terms of repayment on its loans are very attractive in that no interest is charged until six months following the student's graduation from nursing or technology school. Thereafter, interest is charged at the rate of six per cent per year. A total of 33 young people have benefited or are benefiting from Auxiliary funds.

For more detailed information and application

blanks, write to Mrs. Howard Smith, chairman, Health Educational Loan Fund, Woodward, Iowa.

STATE ESSAY CONTEST WINNERS PLACE HIGH IN NATIONAL

All three winners of the AAPS Essay Contest, which was conducted under Auxiliary sponsorship, have placed high in the national competition.

Janet Gereau, a senior at Heelan High School, Sioux City, who won the first prize of $100 in the Iowa contest, received $75 as tenth place winner nationwide. She wrote on "The Advantages of the American Free Enterprise System."

Margaret Rose Glosser, a senior at Blakesburg High School and second-prize winner at the state level, and George Shepherd, a senior at Lincoln High School, Des Moines, who took third prize in the state contest, both received Certificates of Meritorious Achievement in the national competition. They had chosen to write on "The Advantages of the American Free Enterprise System" too.

A PROPER ATTITUDE FOR DRIVERS

Throughout the summer travel months, the nation's freeways and highways will be jammed with vacationers.

Mr. G. W. Gibson, chief engineer for the Dodge Division of Chrysler, urges every motorist to "start out with the proper attitude toward driving" as a means of helping cut down on traffic accidents. "If drivers would drive to avoid accident-producing situations," he says, "there would be fewer highway injuries and deaths."

He offers this additional advice to motorists:

1. Keep a safe distance between your car and the car ahead of you.
2. Use your rear-view mirror.
3. Set your outside mirror to supplement the one inside. Thus, you can eliminate most blind spots.
4. Flash your turn signals well in advance to indicate your intention to change lanes or turn off the road.
5. Have some type of emergency warning signal available in case you must stop at the side of the road to make repairs.
6. Don't drive if you are tired or emotionally upset.
7. Be sure your car is in safe driving condition before you start out.

MEET YOUR MEMBERS

Candidate No. 1
Marshall's Marvel
Mrs. E. J. Marble

At a recent board meeting some voice was speaking; a beautiful commanding sound. There was a trace of a dialect which in no way resembled that of a Scandinavian. I forgot what I was about and just fed my eyes and ears. She was pretty too! I had to get to know her. Here is all you need to know for an introduction:

Her county's Marshall
And we're not partial
Her name implies
She has supplies
For graveyard markers

Born in Wellington, New Zealand
America is now her dreamland
To hear her speak
Is such a treat!

There are children too:
In number, two.
Her talents too
I'll give to you.

She likes to ski
Or maybe read,
Or paint a scene
If so she deems.

With no apology
Her husband's in urology.

In Memory
of
Auxiliary Members
who will be lost
for non-payment of dues
on June 30

Dues are due Now!

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
President-Elect—Mrs. B. F. Kilgore, 5434 Woodland, Des Moines 12
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Editor of THE NEWS—Mrs. W. W. Sands, 1515-41st Street Place, Des Moines 11

Iowa State Medical Society

Washington Freeman Peck Award

presented to

FRIENDSHIP HAVEN HOME FOR THE RETIRED

In bestowing this recognition, the Iowa State Medical Society acknowledges the contribution of the Friendship Haven Home for the Retired in establishing a pattern of comfortable and secure living for elderly citizens which can be duplicated throughout Iowa and the Nation.

John W. Billingsley, M.D.

JOHN W. BILLINGSLEY, M.D., President
Iowa State Medical Society

April 26, 1960









Friendship Haven, at Fort Dodge

Recipient of the 1960 Washington Freeman Peck Award

There are hundreds of homes for the elderly scattered throughout Iowa, but the Iowa State Medical Society presented its Washington Freeman Peck Award to Friendship Haven, at Fort Dodge, last April because it is an especially outstanding institution of that sort. Friendship Haven is a relatively large place, it possesses a well-designed and up-to-date set of buildings, and it is well equipped and staffed, but it is a model chiefly because of the philosophy on which it is conducted —the philosophy that elderly people should be encouraged and enabled to retain and to express their individualities. A few examples will serve to show how that philosophy is put into practice.

Almost every day a load of furniture enters the drive at Friendship Haven. This has happened many hundreds of times, and it will keep on happening, but it will never become an old, old story. Each such load represents the uprooting and transplanting of an individual or a couple, but the transplanting is less painful than it might have been, since treasured possessions are accompanying and will surround their owners. The furniture includes long-loved books and pictures, favorite chairs and lamps. But it may also include exciting things like new drapes or a new rug. In planning with a new resident about bringing furnishings from his or her dismantled home, the Friendship Haven management seeks to do more than provide comforts and conveniences. Its intention is to help and nurture the whole person—mind, body and soul. It strives to undergird and build the individual's sense of personal worth, his need for worthwhile busyness, his neighborliness and his sense of security and contentment.

At Friendship Haven the residents have a maximum of freedom to be different. They take satisfaction in having their own mailboxes, and in being able to buy such things as tooth paste, greeting cards, stamps or an ice cream cone either on the premises or downtown if and when they choose. They find it good to be able to take the bus to town at any hour, to drive their own cars, to entertain guests for meals or for overnight, to have telephones in their rooms and to plant their favorite flowers.

They find it gratifying to call for books at the public library. There are opportunities for them to join in vigorous village songfests, sing in the Chapel choir and to listen to records. There's reading-aloud to be done or listened to; there are mittens to knit; and in the ceramic workshop, creativity is rampant. The looms invite residents to weave yardage, stoles, scarfs, table sets and rugs, and newcomers find their neighbors anxious to teach them the essential procedures. Inspiration and strength come from 14 denominations' joining in corporate worship, prayer and Bible study. Discussion and creative writing groups meet regularly. One may be elected to the village council or to such posts as mayor, town clerk, or representative or alternate, and thus become a part of democracy in action.

In helping to provide these liberties and opportunities, the builders and officers of Friendship Haven must continually seek new staff members—people with affection for and understanding of elderly people, with gifts of perception and discernment, and the intuition that one must have if he is to understand and serve the senile.

MANY PEOPLE ARE VISIBLY REJUVENATED

Three-fourths of the residents of Friendship Haven share in the activities that are offered them, and it is demonstrated daily that purposeful living prolongs their years of self-sufficiency. Unnumbered times one hears such statements as "Why, I haven't seen my sister looking as well as she does now for years!" or "Auntie didn't take her cane to the dining room. It's been years since she last went anywhere without her cane."

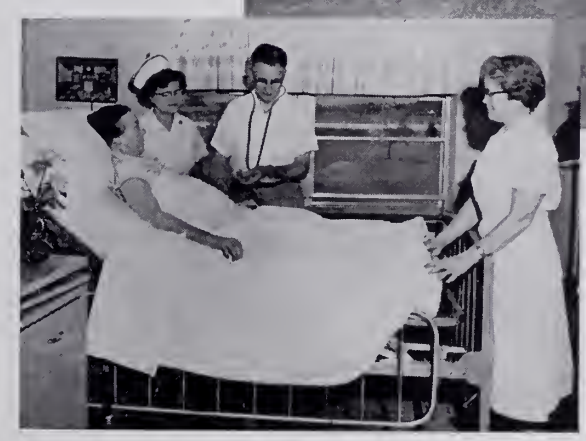
In a planter in one of the lounges, a large leaf on a Dieffenbachia roehrsi was in decline. Yellowing and limp, it was ready to be cut off and dropped into a trash can, but a ceramics enthusiast snipped it off and hastened with it to the workshop. When he had rolled out a ball of clay as one might roll a pie crust, he pressed the leaf into the surface and cut out its impression complete with a reproduction of its vein system. Then, his creative mind and fingers coordinated in gracefully upcurving the entire edge of the leaf, and the promise of a dish was revealed. Next, a long, narrow loop of clay was attached, simulating the stem of the leaf and forming the handle of the dish. The creation passed thereafter from greenware to bisque, through green glazing and through the final test of extreme heat, until there emerged an attractive relish dish perfect for carrot curls and celery hearts. Thus, the faded leaf of Dieffenbachia roehrsi achieved a kind of metamorphosis and a new attractiveness and usefulness. Not altogether dissimilarly, many aging men and women—once discouraged, lonely and drab—are virtually transformed at Friendship Haven, finding a new vitality and a new purpose. Those who can sense the potentials that are dormant within these people can













serve them in the ways they need to be served—can give them bread, and not a stone.

EVEN THE EXTREMELY SENILE ARE BENEFITED

Recently, a visitor remarked: "This place is different. There aren't any people just sitting and staring into space. There's light in their eyes!" This observation holds true even for the extremely senile. A dining and an assembly space with a piano are a part of the planning for them, since they get a special joy from music. Church services are also adapted for the elderly. Other contacts may have been completely lost for them, but with the help of sympathetic leaders they worship coherently and meaningfully. Nurses, attendants and doctors who see them thus always depart misty-eyed.

In the health service areas are the residents who are no longer self-sufficient in their own rooms. The extra attention given them is commensurate with their degrees of impairment of mind and body, but every effort is made to encourage independence and to delay their need for admission to the facilities for the care of the chronically or critically ill. Friendship Haven is equipped and staffed to provide nursing care, but it does not offer laboratory or x-ray services, or surgery. All residents have access to the house physician, but are free to utilize or to by-pass his services. There are no compulsions. The institution does not assume responsibility for the complete medical care of the residents, but a chain of contacts is in readiness to bring needed care to every individual.

IT'S A PLACE WHERE OLD PEOPLE WANT TO LIVE

An increasing number of people are considering Friendship Haven as they make long-range plans for themselves. In the natural course of events, they know, the porch repairs, the shoveling of snow and the care of lawns and gardens will become too burdensome, and they regard this as an attractive place to which to retire.

Then too, there are elderly couples, already retired, who could expect to maintain homes by themselves for several years longer, but who choose to move into Friendship Haven before a crisis arises. One of the 32 couples now living there has expressed it in this way: "We wish we could tell all couples who are in circumstances such as ours and who plan to make some such change 'some day' to do it now. Don't wait until loneliness or sickness forces you to make emergency decisions. Start a renewed life at Friendship Haven."

Through intense effort, the costs of care at Friendship Haven have been kept among the lowest in the nation. First opened in 1950 with 30 residents, in 1960-1961 this $2,500,000 enterprise will provide homes for over 400 elderly people. This rapid development has come because of the very great need for the kind of living provided by Friendship Haven.

The Prevalence of Visual Defects

More than half the people in this country have some kind of visual defect, according to the current issue of PATTERNS OF DISEASE, a Parke, Davis & Company publication for the medical profession. Only 43.5 per cent of Americans tested in one survey had normal vision (i.e., 20-30 or better in both eyes). Almost one in 10 were found to have the use of only one eye, and an estimated total of 83,500,000 (about one in every two Americans) wear either eyeglasses or contact lenses.

Further statistics in the report showed that there are 960,000 blind persons in the country, and an additional 2,064,000 with serious visual impairments. Together, blindness and poor vision rank fourth in the list of disabilities in the United States —outranked only by impairments of hearing; of the limbs, back and trunk; and of the lower extremities.

Men do better, visually, than women. In one study of over 100,000 persons it was found that in the 30-35 yr. age group, approximately 42 per cent of the men suffered from defective vision, as compared with about 48 per cent of women. In the over-40 yr. age group, the difference was even more marked—about 10 to 12 per cent higher for women than for men.

Marked differences are also found in breakdowns by occupation. Clerical and administrative workers top the list of visually defective persons in one study reported by PATTERNS, with 51 per cent requiring glasses. At the other end of the list are drivers of mobile equipment, of whom only 27.2 per cent wear glasses. As a group, industrial workers seem especially susceptible to eye trouble, not so much because of any inherent weakness as because of the high proportion of eye injuries in industry. "One thousand eye injuries occur every day of industrial operation," the publication pointed out, adding that at least 90 per cent of them would have been preventable.

Old age, however, remains the chief cause of blindness. Of the diseases closely associated with the aging process, senile cataract, glaucoma and other diseases of unknown etiology are responsible for 11,300 (38 per cent) of the new cases of blindness each year. Other diseases like diabetes and vascular ailments account for 6,300, and infectious diseases such as syphilis and trachoma are responsible for only 1,300 of them each year, nowadays. The incidence of blindness rises rapidly with increasing age. From 1.3 per 1,000 persons in the under 44 yr. age group, the rate rises to 5.9 in the 45-64 yr. group, to 25.9 in the 65-74 yr. group, and to 83.3 in the 75 yr. and older group.

Care of Lacerations and Other Injuries Of the Soft Tissues of the Face

THADDEUS J. LITZOW, M.D.

ROCHESTER, MINNESOTA

THE IMMEDIATE CARE of injuries to soft tissues has a twofold purpose. First, it is an attempt to restore normal or optimal function to the injured tissues at the earliest possible time after the injury. Second, it is an effort at preventing permanent deformity, and this type of prevention may be just as important cosmetically as the first-mentioned purpose is, if not more so. However, there are instances in which such attention must be delayed because of the urgency of treating the patient's more serious injuries, or because his condition is so critical that only supportive measures and observation can be employed.

When the patient arrives at the emergency room, a careful examination should determine the extent of the injuries to the soft tissues and the presence of any associated injury or fracture of the underlying bones. Before the examination, or if necessary during it, a history of the accident and a pertinent medical history should be taken. How the accident occurred, whether or not the patient is conscious, whether foreign bodies have been introduced and the extent of the loss of blood are some of the factors that will determine the course of treatment.

ANESTHESIA AND MAINTENANCE OF AIRWAY

Before the plan of treatment can be started, the choice between local and general anesthesia must be made. Small lacerations, even in the youngest patient, usually can be treated with the aid of local anesthesia. More extensive injuries, particularly in children, can be treated more easily, quickly and accurately with the aid of general anesthesia.

When surgical treatment to the face is carried out with the patient under the influence of general anesthesia, an endotracheal tube should be emplaced to ensure an airway. As a rule, the tube can be inserted through the nose or mouth, and secured in place with adhesive tape, without disturbing the field of the operation. If the injuries are extensive, requiring exposure of the entire face, attachment of the endotracheal tube with wire to one of the posterior teeth of the lower jaw will minimize the tube's interference with any surgical procedures in the lower one-third of the face. When general anesthesia is desirable and permissible, except for the fact that the patient has recently ingested food or fluids, one can apply a dressing, hospitalize and delay treatment for several hours. The reparative procedures can then be started safely. The use of any anesthetic agent and the duration of the operation must always be compatible with the general condition of the patient.

FOREIGN BODIES MUST BE CAREFULLY REMOVED

After satisfactory anesthesia has been accomplished, the injury can be examined more thoroughly. A good rule of procedure is always to look for a foreign body, whether the history suggests that there may be one or not. Any foreign material left in the wound may result in a permanent tattoo effect. The necessity for immediate removal of all foreign material so as to avoid a tattoo effect is

Dr. Litzow is a member of the staff in the Section of Plastic Surgery at the Mayo Clinic, and he made this presentation at the Postgraduate Medical Education Course co-sponsored by the Iowa State Medical Society and the Pottawattamie County Medical Society, in Council Bluffs on October 15, 1959.

well illustrated in Figure 1A. This patient was exposed to a dynamite blast and sustained multiple powder burns, abrasions and lacerations contaminated grossly with dirt. General anesthesia was employed, and a stiff hand brush and soap were used to remove all dirt from the superficial layers of skin. Dirt lodged deep in the more severe lacerations was removed by gentle curettement, and ragged skin edges were pared and then sutured to give the final result shown in Figure 1B. Another aid to the removal of fine foreign particles is the effervescent action of hydrogen peroxide in the wound. The application of hydrogen peroxide should be followed by irrigation with a saline solution.

Hemostasis is accomplished by clamping the bleeding vessels, crushing only a minimal amount of tissue in the beaks of the forceps. The clamped vessels are then ligated with a 5-0 catgut suture. Sometimes profuse bleeding occurs, and it must be controlled immediately by pressure or clamping of the cut vessels before more definitive care can be given.

GOOD REPAIR TECHNICS

The cut edges of a laceration should be at right angles to the surface. If they form oblique or acute angles, the edges should be recut with scalpel or scissors to form right angles. The skin edges then can be closed with interrupted sutures of 5-0 or 6-0 black silk. A fine plastic forceps (also referred to as a "dural forceps") is used to handle the tissues gently. The skin of the eyelids is especially thin and fragile, and can be sutured atraumatically with a 6-0 silk on a swedged needle. All interrupted skin sutures are secured by a triple granny knot tied to one side of the closed laceration.

Lacerations extending through and through such structures as the lip are accurately closed by the apposition of proper layer to layer. Interrupted catgut sutures are used to close the mucosal and muscular layers. Small Penrose drains or rubber bands may be inserted for drainage.

When a laceration is being closed, prominent landmarks such as an eyebrow, the helix of the ear, or the junction of the vermilion and skin of the lips should be accurately realigned. It is best to begin the closure at these points and then proceed to close the remaining portion of the wound.

If primary healing of the laceration takes place, sutures can be removed on the fifth or sixth postoperative day. The incidence of infection in



Figure 1A. Injury caused by dynamite blast. The dark area over the left upper eyelid and eyebrow is where full-thickness skin was lost. Figure 1B. Final result. Local skin flap was used to cover the defect in the skin of the eyelid and eyebrow.



Figure 2A. Partial-thickness burn of entire face. Treated by exposure method. Figure 2B. Final result.



Figure 3A. Contracted scar on neck of a young woman. Figure 3B. Final result after excision of scar and "Z" plasty.



Figure 4A. Same patient as in Figure 3A in profile view. Figure 4B. Restoration of natural profile of chin and neck.

wounds is very low, and generally a good result can be expected.

In most instances, thermal burns of the face are treated by the open method, as in Figures 2A and 2B. Crusts and desquamated bits of skin can be soaked off with moist compresses. Full-thickness burns will require skin grafting. Loss of the skin of the eyelids can be covered with full-thickness skin taken from behind the ears. The grafts should be large, to allow for shrinkage.

Secondary improvement of old scars that are wide, irregular, depressed or elevated usually can be brought about by simple excision of the scar and accurate closure. In other instances, such as that shown in Figure 3A, excision and "Z" plasty are necessary to achieve an optimal result, as depicted in Figures 3B, and 4A and 4B. Hypertrophic scars and keloids constitute separate subjects that will not be discussed here.

PRECAUTIONS AGAINST INFECTIONS

The usual precautions and prophylactic measures against tetanus, although they are not discussed here, are advocated and should be followed in treating the patient. Similarly, although they are not discussed here, antibiotic agents are used in treating infected wounds, and sometimes are given prophylactically.

THE GENERIC FALLACY

Prescribing drugs by generic name would necessitate astronomical expenditures of public funds, and would almost certainly bring an end to pharmaceutican research, Mr. Francis Boyer, board chairman of Smith, Kline & French Laboratories, told the 90th annual convention of the New Jersey Pharmaceutical Association on June 21.

In theory, he said, every medicine on the market should be of top quality, but for the achieving of that ideal the federal government would have to establish universal certification and place an inspector in every drug plant. As it is now, the FDA is undermanned for the enforcement of existing statutes, and its staff would have to be multiplied if it were to attempt guaranteeing the purity and potency of every pharmaceutical placed on the market.

Mr. Boyer went on to point out another major difficulty: that by outlawing prescribing by brand name, the government would do away with the patent system and remove the major incentive for pharmaceutical research. In Italy, he said, the absence of patent protection has produced organized product piracy, and in the Soviet Union, where generic-name prescribing was pioneered, there hasn't been a single important pharmaceutical breakthrough in the 40 years of the country's existence.

Acute Intermittent Porphyria in Surgical Practice

A Review of the Literature and a Report of Six Cases

CORNELIUS P. ADDISON, M.D.

WATERLOO

PORPHYRIN PIGMENTS are present in almost every cell of every organism, both plant and animal, and they enter into such fundamental processes as cellular respiration, oxidative metabolism and biological transport mechanisms.[5] They are found both free and combined in the body in hemoglobin, myohemoglobin, cytochrome and catalase, which presumably are the source of porphyrins excreted in normal subjects.[6]

Their chemical structure was clarified in 1937, and typing of the porphyrins refers to their isomeric relationships to the original structures. As yet, only porphyrins corresponding to the I and III isomers have been found in nature. They are complex compounds consisting of four pyrrole nuclei united by methane bridges. For details of their chemical structure, I would refer you to any standard textbook on biochemistry or laboratory procedure.

Among the porphyrins isolated and identified are uroporphyrins, coproporphyrins and porphobilinogen. Normal subjects excrete five to 10 micrograms of each type daily, both in urine and in feces. These normal quantities of uroporphyrin and coproporhyrin do not affect the color of the urine, but when they are present in pathologic amounts, the urine can become reddish-black.

Clinically, the by-products of metabolism of the porphyrin complexes may be excreted in the form of uroporphyrin I and III, and coproporphyrin I and III. The coproporphyrin may be excreted as colorless porphobilinogen, which changes to porphobilin on standing in the sunlight. It can then be detected by a modification of the Ehrlich reaction for urobilinogen, as will be seen later. It is this porphobilinogen that Watson feels is the agent responsible for the production of the symptoms of acute porphyria when the liver fails to convert it to porphyrins.[8]

Some porphyrins, especially uroprophyrin I and coproporphyrin I, have the curious property, when injected into the blood stream or when produced in disease, of sensitizing the skin to sunlight. Of the naturally occurring porphyrins, uroporphyrin I produces the most light-sensitizing action. When large amounts of porphyrins type III are excreted, as in acute porphyria, light sensitivity does not occur, but there are abdominal, neurologic or mental symptoms.

Enormous amounts of both types of coproporphyrin and uroporphyrin are found in the urine and feces of patients with disordered porphyrin metabolism.

"Porphyria," then, is a disease associated with abnormal porphyrin production. It is a hereditary disturbance due to an inborn metabolic defect.

PORPHYRINURIA

Porphyrinuria must be distinguished from porphyria, and can be characterized as follows. It is a condition in which increased porphyrin formation is due to some pathologic process other than porphyria.[7] There are increased amounts of porphyrins in the urine, and the predominating ones are coproporphyrins. Conditions responsible for this excess excretion include: hepatic diseases such as cirrhosis, obstructive jaundice and infectious hepatitis; hematologic diseases such as pernicious anemia, hemolytic anemia, leukemia, Hodgkin's disease and aplastic anemia; and drug and chemical toxicities such as reactions to sulfa, anesthetics, sedatives, lead and alcohol. The term *porphyrinuria* is used to describe this phenomenon.

CLASSIFICATION

As described by Neilson, the clinical porphyrias can be divided into two broad groups according to the type of biochemical defect that is responsible. Thus, there is the "erythropoietic," with the primary difficulty stemming from abnormal hemoglobin synthesis in the cells of the bone marrow, and the "hepatic," in which the underlying defect seems to reside in the liver.[5]

So it is now common to divide the forms simply into the erythropoietic (congenital, infantile) form, and the hepatic form, and the latter is further divided according to clinical and laboratory features (Table 1).

Van der Reis[7] suggests that the porphyrias be classified in three categories:

I. *Porphyria with sensitivity to light (congenital, infantile, erythropoietic).* It is characterized by the

Dr. Addison made this presentation at a meeting of the Iowa Academy of Surgery, in Iowa City on October 10, 1959.

urinary excretion of uroporphyrin I and coproporphyrin I. The absence of porphobilinogen is noteworthy.

II. *Intermittent acute porphyria.* This is characterized by abdominal and nervous symptoms. There is an increased excretion of coproporphyrin III, or porphobilinogen.

III. *Mixed form of hepatic porphyria.* This differs since it has cutaneous as well as abdominal symptoms. Photosensitization occurs gradually in adults. Cutaneous blisters, pigmentation and even jaundice occur. The urine contains increased amounts of porphyrins I and III. This and the previous form are possibly variants of one fundamental abnormality.

A recent textbook of medicine edited by Cecil[2] provided still a different classification when it presented in table form the 74 cases of porphyria studied at the University of Minnesota over an 18-year period, as follows:

Erythropoietic	2
Intermittent acute	36
Cutanea tarda	15
Mixed	6
Latent	15

It can be noted from the above that almost one-half of the cases were of the acute, intermittent type. It is with this type of case that this presentation will be concerned.

ETIOLOGY

The true cause of acute intermittent porphyria cannot be definitely stated, but the genetic defect is said to be inherited as a Mendelian dominant characteristic.[5] It is apparently quite prevalent in Sweden, Switzerland and South Africa. Watson[2] finds that evidence of liver injury or liver disease is frequently encountered in the hepatic types of porphyria, and that acute attacks are often precipitated by chemicals in the intermittent acute form of the disease. Sulfonal, Trional, barbiturates, and less frequently alcohol have been implicated. He feels that since porphobilinogen is entirely lacking from the photosensitive types and is quite a prominent feature in the intermittent acute type, it is reasonable to believe that porphobilinogen is of decisive importance in causing the abdominal or nervous manifestations of acute porphyria.

TABLE I
(Neilson and Neilson[5])
CLASSIFICATION AND DESCRIPTION OF HUMAN PORPHYRIA

	Erythropoietic	*Hepatic*		
		1. INTERMITTENT ACUTE	2. CHRONIC CUTANEOUS (CUTANEA TARDA)	3. MIXED
Genetics	Mendelian recessive	Mendelian dominant		
Onset	Infancy or childhood	Early adult life	Adult or middle-age	Same
Clinical	Skin photosensitivity Red urine Erythrodontia Hirsutism Splenomegaly Hemolytic anemia Occ. cirrhosis	Abdominal pain Neuropathy or paralysis Painful extremities Psychosis Hypertension Obstipation Oliguria Convulsions	Skin photosensitivity Violaceous hue Pigmentation Liver cirrhosis Previous hepatitis Scarring of skin	Same as chronic cutaneous plus abdominal and nervous symptoms
Bone Marrow	Porphyrins elevated	Normal	Normal	Normal
Urine	Red Fluoresces Uro-I and Copro-I present *Porphobilinogen absent*	Portwine occasionally Uro- and Copro-III present *Porphobilinogen present*	Orange or red Uro- and Copro-I, III present *Porphobilinogen absent*	Same as chronic *Porphobilinogen present*
Prognosis	Good	Fair, poor after recurrences	Good depending on liver status	Same as intermittent acute
Treatment	Protect skin Splenectomy	Symptomatic Avoid barbiturates, alcohol, hepatotoxins ACTH or cortisone? Thorazine or rauwolfia Demerol, chloral hydrate	Symptomatic Protect skin Avoid barbiturates, alcohol, hepatoxins	Symptomatic

CLINICAL CHARACTERISTICS

The symptoms and findings of intermittent acute porphyria are abdominal, psychiatric, neurologic and vascular.

1. *Abdominal.* The abdominal pain is usually severe and colicky. It may be generalized, or it may be localized to any part of the abdomen or loins. This is the major gastrointestinal symptom. The pain may be of either sudden or insidious onset, perhaps taking days to reach its peak. This pain may mimic that seen in any acute surgical emergency and may last from hours to months. Markovitz[4] reviewed the case histories of 69 patients and reported that nausea or vomiting or both accompanied the abdominal pain in about half the cases. Marked constipation is the rule, and may constitute downright obstipation, so that abdominal distention and intestinal spasm may be noted. X-ray findings are usually nonspecific and may reveal dilated loops of small or large bowel, impacted feces, and occasionally fluid levels suggestive of intestinal obstruction. Many of the patients have been subjected to one or more laparotomies. The patient may complain of tenderness on palpation by the examiner, but the abdomen is soft and there is no rebound tenderness, even though the pain is usually severe. Watson[8] reported an unusual case of volvulus with gangrene in which it is believed that the volvulus was secondary to disturbed motor function of bowel caused by the porphyria.

2. *Psychiatric.* The people with acute porphyria have been described as insecure, emotionally distressed patients who suffer from intermittent attacks of severe abdominal colic. Mental or psychic changes were present in over three-fourths of the patients reported by Markovitz.[4] Undue nervousness, hysterical behavior and even epileptiform convulsions may occur. Visual disturbances and transient dream states or "petit mal" phenomena often occur. During an acute attack, suicidal tendencies are often present, as well as hallucinations. Apathetic, unpleasant and complaining behavior, and a tendency to speak in a whining voice, are typical of patients with porphyria. If barbiturates are given to calm the patient, the condition may be greatly aggravated. All of the symptoms may vary markedly from day to day, and lead to the diagnosis of hysteria.

3. *Neurologic.* The neurologic manifestations are many and varied, and may take the form of marked weakness, paresthesias, muscular atrophy, pains in the arms and legs, back pain and even convulsions. The weakness may begin anywhere and progress just as unpredictably. Early atrophy of musculature is noted in many cases in which paralysis develops. The deep tendon reflexes are hypoactive or absent. They can be present on one day and absent on the next, only to reappear later. Or there is persistence of the ankle reflex in the absence of patellar reflexes. Cranial nerve involvements have been reported, including vocal cord paralysis with a resultant hoarse, high-pitched voice, dysphagia and tachycardia, respiratory failure and death.[3, 4, 6]

4. *Vascular.* Hypertension of an intermittent nature may be a striking feature of the disease.[5] When present, it can be very helpful in indicating the true nature of the ailment. Low-grade fever is often present during an acute attack, and tachycardia is almost invariably associated with it.

DIAGNOSIS

Patients with acute intermittent porphyria have been mistakenly diagnosed as having combat fatigue, hysteria, pheochromocytoma, appendicitis, glomerulonephritis, muscular dystrophy and delirium tremens, among other things. To make the diagnosis, the "index of suspicion" must be high in the mind of the attending physician.

The possibility should be thought of in patients having abdominal pain with minimal physical findings, a peripheral neuropathy of any type, and continued psychoneurotic symptoms. A history of many laparotomies with persistence of pain or the passing of dark urine is also suggestive.

The definitive diagnosis depends on the demonstration of porphobilinogen or uroporphyrins in the urine. The simple test for porphobilinogen is almost always positive in intermittent acute porphyria, rarely positive in mixed porphyria (only if associated with abdominal or nervous manifestations), and never positive in porphyrinuria (such as lead poisoning, even at the height of colic).

The photosensitive types of porphyria are characterized by the presence of large amounts of uroporphyrin, with the result that the urine is red and at once attracts attention.

Probably because of the porphobilinogen, the urine of the acute intermittent type of porphyria is darker, with more brown and less red color than that of the pure photosensitive types. If not dark during the acute attack, it will turn to a dark Coca-Cola color if allowed to stand in sunlight for several hours, because of the change of porphobilinogen to porphobilin. This is true in 70 per cent of patients with acute intermittent porphyria, according to Seide.[6] He further goes on to state that about 80 per cent of these patients have positive tests for porphobilinogen, and most of the remaining 20 per cent will have uroporphyrins in the urine.

Rarely, tests for porphobilinogen and uroporphyrin are negative during the acute attack, revealing porphobilinogen only after the acute attack has subsided.

Once the diagnosis is thought of, the Watson-Schwartz test for porphobilinogen can be done rapidly. If it is positive and the patient is not photosensitive, it almost certainly indicates the presence of acute intermittent porphyria, as stated by Markovitz.[4]

CASE STUDIES

Case 1. Mr. R.S., age 29, was admitted to the hospital December 11, 1956, with pain in the upper abdomen of six hours' duration. It awakened him suddenly from sleep at 2 a.m., and increased in severity as time passed. There was nausea, but no vomiting or diarrhea. There was a negative history of similar pain in the past. He was a veteran of Navy service, and had had no serious illnesses and no operations.

Physical examination. The patient was a thin, poorly nourished young white male, who appeared to be in acute distress and in severe pain. The blood pressure was 110/60 mm. Hg., and the mouth, lips and skin were dry. The abdomen was flat and presented marked rigidity over the entire surface, with the maximum amount of tenderness in the upper midabdomen. He seemed to be weak and exhausted, but no abnormal neurological findings were apparent. The rectal examination was negative. The temperature was 101°F. (oral).

Laboratory findings. The urinalysis was negative, the blood sugar was 117 mg. per cent, and the blood chemistry showed that the hemoglobin was 13.6 Gm., with a hematocrit of 42 per cent. There were 36,700 white blood cells per cubic millimeter, and the differential count showed 14 stab forms, 73 segmented cells and 3 lymphocytes. The x-ray film of the abdomen in the upright position was reported "negative for free air or gas-filled loops of bowel."

Clinical course. Intravenous fluids were started and surgical laparotomy was performed four hours after admission. The findings were almost negative. The stomach and liver were normal to inspection and palpation, the serosa of the small bowel was dry and dull, and the mesentery was granular to palpation, with a heavy infiltration of firm, yellow fat. The appendix was small and bound down by fibrous adhesions to the posterior margin of the cecum. The gallbladder was distended with dark bile, but the cystic and common ducts were not distended or abnormal to palpation. The gallbladder was emptied of its bile by needle aspiration, and an appendectomy was performed. The patient's temperature spiked to 103.4°F. on the evening of surgery, but dropped to normal levels on the next day and remained there.

The urine tested in the laboratory the following day was found to be positive for porphobilinogen and uroporphyrin.

A chest x-ray showed an area of atelectasis and pneumonitis in the right lower lung on the day following surgery.

A repeat blood count on the second postoperative day revealed 19,900 white blood cells. Liver function tests were performed and were within normal limits. The heterophile antibody test was negative. On the fourth postoperative day (December 15, 1956), the urine was negative for porphyrins. The patient's further convalescence was uneventful, and he left the hospital in good condition.

The first case was a diagnostic problem, and the correct diagnosis was established on the day following a negative surgical exploration. It served to focus my attention on the possibility of porphyria in subsequent cases where the diagnosis was not readily apparent.

Case 2. Mr. D.J., age 42, was admitted to the hospital on July 10, 1958, because of severe periumbilical and epigastric pain of one hour's duration. The onset of pain appeared to have occurred one hour after he drank a quart of beer at the home of some of his friends. Vomiting of clear liquid had occurred twice before admission. There was a history of some nausea for about a week prior to this episode, but there had been no previous ulcer or gastrointestinal symptoms.

Physical examination. The patient was a rather well-nourished, stocky white male, and appeared to be in acute distress. The temperature was 98.6°F. (oral), and the blood pressure was 100/50 mm. Hg. The physical findings centered in the upper abdomen, where there were tenderness, muscle guarding and rebound tenderness. The extremities presented no reflex changes, and there was no muscular weakness. It seemed that the patient had an acute pancreatitis or a perforating peptic ulcer.

A scout film of the abdomen (with the patient in the upright position) revealed no free air under the diaphragm. There was some gas and fecal material scattered throughout the colon and small intestine, but this, it was reported, was "probably of reflex origin."

The serum amylase was reported to be 80 mg. per cent.

Intravenous glucose in water was given, and a Levin tube was inserted and Wangensteen suction applied.

Routine laboratory work on the following morning revealed 12.2 Gm. of hemoglobin, and 10,500 white blood cells, with 85 segmented cells, 11 lymphocytes, 3 stab forms and 1 eosinophil. The urinalysis was negative.

Clinical course. In spite of morphine and atropine given every few hours, the abdomen remained tender and resistant to palpation, with muscle guarding very apparent. An urge to evacuate the bowel appeared on the afternoon after admission, and the patient was assisted to the bathroom, where a watery stool was passed without difficulty.

On the following morning (7/12/'58), the urine was tested for porphyrins, and was found to be positive for porphobilinogen and negative for uroporphyrin. The abdominal symptoms had subsided by then, and the Levin tube was removed. The patient was placed on clear liquids, and they were well tolerated.

Urine tests on three successive days thereafter were negative for porphyrins.

Gallbladder x-rays revealed a normally functioning gallbladder, and an upper gastrointestinal

series was reported to reveal "a duodenal ulcer, with duodenitis and some antral spasm."

The patient was given a gradully increasing diet with antispasmodics, and showed marked improvement on an ulcer diet. He left the hospital improved on 7/16/'58.

This was probably a latent case of porphyria, with symptoms precipitated by the intake of alcohol.

Case 3. Mr. E.J.P., a 27-year-old colored male, entered the hospital on 10/31/'58 with the complaint of painful discomfort in the abdomen that had awakened him at 5 a.m. Cramps and abdominal pain started in the mid-epigastrium, persisted and became more severe. He obtained no relief from pacing the floor, from drinking warm water with baking soda, or from applying a hot water bottle to the abdomen.

Physical examination. On admission at 7:30 a.m., his temperature was 104°F. (oral), and his blood pressure was 135/80 mm. Hg. He walked with some difficulty, favoring his right side. The abdomen was slightly distended, and there was resistance, muscle guarding and tenderness to palpation over the entire abdomen, but most marked in the right lower quadrant. There was suggestive rebound tenderness on the right side. The extremities presented no abnormal reflexes, muscle weakness or paresthesias. Rectal examination produced marked tenderness in the pelvis, especially on the right.

Laboratory findings. The urinalysis was negative. The blood count revealed 15.0 Gm. of hemoglobin, with 19,000 white blood cells of which 54 per cent were segmented, 32 per cent were stabs and 13 per cent were lymphocytes.

Clinical course. An exploratory laparotomy for appendicitis was conducted that afternoon, and a rather normal appendix was found lying in the usual location. It was removed. The distal bowel was filled with gas and liquid stool for a distance of 16 in. proximal to the ileocecal valve, and the surface was granular, edematous and inflamed. There was no mesenteric lymphadenitis and no Meckel's diverticulum.

The next morning urine was sent to the laboratory and was found to be positive for coproporphyrin. On the following day the urine was positive for porphobilinogen and coproporphyrin, and was negative for uroprophyrin. Subsequent daily urinalyses were positive for porphobilinogen alone until the sixth hospital day, when the urine was negative for all porphyrins.

The blood serology was reported as a positive Kolmer 1:2, but a doubtful VDRL.

The pathologist reported a normal appendix.

The patient's postoperative course was uneventful, and he left the hospital on the sixth postoperative day.

This was the second case explored for appendicitis with negative findings, and it served to reemphasize the need for consideration of porphyria as a cause for abdominal symptoms.

Case 4. Mr. R.B., age 57, entered the hospital on the evening of November 30, 1958, with a history of severe pain in the upper abdomen that had appeared after the morning meal on the day of his admission and had been followed by vomiting. Pain had become more severe and more generalized as the day progressed, and was accompanied by chills and generalized malaise. There was a history of similar upper abdominal pain three years previously, but it had subsided spontaneously after several days. There had been no history of acholic stools or dark urine, but the patient had been told by his family physician that he probably had gallbladder disease and should avoid fatty foods. An appendectomy had been performed in 1920.

Physical examination. The temperature was 102°F. (oral), and the skin was warm and dry. The patient appeared to be in acute distress and was found to be markedly tender to palpation in the upper abdomen, with definite muscle guarding and splinting in the right upper quadrant. Rectal examination was negative. The patient was slightly icteric.

Laboratory findings. The hemoglobin was 14.25 Gm., the hematocrit was 46 per cent, and there were 30,300 white blood cells, with 71 segmented cells, 22 stabs and 7 lymphocytes. The serum amylase on the evening of admission was 60 mg. per cent (negative). The urinalysis on the next morning was positive for bile and albumen, as well as positive for porphobilinogen, uroporphyrin and coproporphyrin.

X-ray findings. An upright scout film of the abdomen was reported to show "gas and fecal material present in the large bowel of a relatively normal amount, but . . . an occasional bubble of gas in the small bowel, mainly in the mid-abdomen, which suggests some intra-abdominal irritation with a slight ileus."

A cholecystogram showed "failure of the gallbladder to visualize at any time, but no evidence of opaque stones in the gallbladder region."

Further laboratory tests. Liver function studies revealed an obstructive type of jaundice. Repeat urine studies on the third and fourth hospital days were negative for porphobilinogen and uroporphyrin.

Clinical course. Surgical exploration was conducted on December 3, 1958, and stones and calcareous material were found in the gallbladder and common duct. Cholecystectomy and choledochotomy, with insertion of a T-tube, were performed, and a rather uneventful recovery resulted.

This patient had underlying biliary tract disease that was responsible for his symptoms, but he also had porphyria, as evidenced by the porphobilinogen in the urine. It will be necessary to consider porphyria as a cause of any future symptoms of abdominal pain.

Case 5. Mrs. I.M.C., age 32, entered the hospital on January 12, 1959, with a history of pain in her right side for three days prior to admission. At

no time had there been nausea, but the pain had become increasingly severe and was accompanied by some urinary frequency and dysuria. Her past history revealed three normal pregnancies, as well as treatment for a severe anemia of unknown type in 1957.

Physical examination. The temperature was 100.8°F. (oral), and the blood pressure was 108 60 mm. Hg. The abdominal examination revealed marked tenderness with some splinting to palpation in the right lower quadrant, and questionable rebound. Bowel sounds were normal to auscultation. Pelvic examination revealed a normal anteverted uterus with no adnexal masses, but tenderness above the uterus, especially on the right side. Rectal examination produced more tenderness on the right than on the left.

Laboratory findings. The urine was straw colored and cloudy, and had a specific gravity of 1.022. It contained 1+ albumin and was positive for bile. Urobilinogen was tested for and reported positive. The blood count showed 14.25 Gm. hemoglobin and 21,800 white blood cells, with 64 segmented cells, 26 stabs and 8 lymphocytes.

Clinical course. Surgery was performed on the evening of admission, and a definitely inflamed appendix was found and removed. The urine was tested on the next day and was reported to be positive for both porphobilinogen and coproporphyrin. Other laboratory tests including cephalin flocculation, thymol turbidity, Van den Bergh and total proteins with A/G ratio were reported as negative or normal. Following the receipt of the pathology report of "acute, suppurative appendicitis," no further tests for prophyrins in the urine were conducted. The patient's convalescence was uneventful, and she left the hospital on the sixth postoperative day.

This woman's case serves to illustrate how an acute surgical disease can be present even when there is laboratory evidence of acute porphyria. Perhaps the porphyria was of the latent type and was activated by the acute appendicitis.

Case 6. Mr. F.B., age 39, was admitted to the hospital on February 2, 1959, with the complaint of painful discomfort in both kidney regions and in the suprapubic region for three days. Nausea, malaise and feverishness preceded the urinary-tract pain. Vomiting occurred the day before admission, and persisted even when only clear liquids were taken. The urine was dark on the morning of admission. The past history was negative except for the fact that an appendectomy had been performed 3½ years before.

Physical examination. The patient was a tall, husky white male who appeared to be acutely ill. The temperature was 101.8°F. (oral), and the blood pressure was 127/85 mm. Hg. The abdomen was tender to palpation in both left and right upper quadrants, as well as in the renal areas, bilaterally, with radiation of the pain down each flank into the suprapubic region. There was definite muscle guarding and resistance to palpation over the entire abdomen, but no masses or rigidity could be palpated. The extremities presented no abnormal reflexes or weaknesses. Rectal examination was negative, and the prostate was of normal size and was non-tender.

Laboratory findings. The urine was amber-colored, had a specific gravity of 1.028, and was negative for sugar and albumin. Microscopy revealed 10-20 red blood cells and 1-3 white blood cells per high-power field. The reaction for bile was positive.

The blood count showed 13.2 Gm. hemoglobin and 7,500 white blood cells, with 71 segmented cells, 15 lymphocytes, 11 stabs and 3 monocytes. The sedimentation rate was 38 mm. after one hour. The VDRL was negative.

The urine was then tested for porphyrins, and was found to be positive for porphobilinogen and uroporphyrin.

X-ray findings. A chest x-ray revealed an area of haziness and mottling in the left base just above the diaphragm, and it was interpreted as "a small area of pneumonitis in the left lung."

Clinical course. The patient was given sedation and intravenous fluids, but no antibiotics. An expectorant mixture was given on the second day, along with a graduated diet which was tolerated. Daily urine tests were then conducted, and there was a persistence of the positive porphobilinogen for seven days. Thereafter, they were negative. The patient's clinical course improved steadily without further special treatment, and he left the hospital afebrile and asymptomatic on the eighth day.

This patient presented a history that suggested porphyria, since the urine was dark on the morning of admission. The pneumonitis possibly activated the acute porphyria, although it could have been just a coincidental finding.

SUMMARY OF THE CLINICAL CASE PRESENTATIONS

1. All of the patients had abrupt onset of their symptoms.
2. Only two of the six patients had had previous surgery.
3. None of the patients presented themselves with symptoms suggestive of hysteria. They all were stable, well-adjusted people with no unusual nervous complaints.
4. Five of the six cases had temperature elevations when first seen.
5. Four of the six cases had elevated white blood cell counts, and the lowest of these was 10,500 white blood cells per cubic millimeter.
6. None of the cases were found to have flaccid musculature of the abdomen, or complaints of pain out of proportion to the findings observed.
7. All of the cases were found to have porphobilinogen in the urine on at least one occasion, and most of them were found to have it on multiple occasions.

8. None of the cases were found to have abnormal reflexes or unusual weakness of the extremities.

9. In three of the cases, the urine was found on routine examination to be positive for bile. One of these patients became jaundiced and was found to have choledocholithiasis.

10. Three of the patients were operated upon for suspected appendicitis. In two, the intra-abdominal findings were negative, but in the third a suppurative appendicitis was found.

11. Two of the cases had positive lung findings on x-ray, one for atelectasis and one for pneumonitis.

12. X-rays of the abdomen in two patients were reported to show collections of gas in the small bowel suggestive of intra-abdominal irritation or ileus.

13. Only one patient gave a history suggestive of having passed dark urine.

14. No attempt was made to treat porphyria specifically. Medications that were used included those usually employed for symptomatic relief.

15. All cases had uneventful clinical courses and recovered from their original complaints. There have been no known recurrences to date.

SUMMARY

Acute intermittent porphyria is a disease that is gaining more and more recognition in the literature as a cause of symptoms difficult for the average practitioner to evaluate. This condition must be thought of in the differential diagnosis of any acute abdominal pain in which the definitive diagnosis is not clearly apparent. It should perhaps be sought for in even those cases in which a clear-cut diagnosis can be made, on the chance that a contributing cause may be found for the findings presented. If a more widespread search for porphyrins in the urine is conducted, it may be possible to prevent a needless exploration of the abdomen, as well as to make the proper diagnosis in cases of obscure or undiagnosed abdominal pain. When more and more cases have been discovered and the significant clinical data have been correlated, a more thorough understanding of the disease entity may become apparent. This could result in better handling of this disease by the members of the medical profession, and thus be of benefit to the population as a whole. Although there is no specific, curative treatment to be offered—i.e., anything more than supportive or symptomatic—there is always the hope that if the course of the disease cannot be helped, at least it won't be hindered.

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THE INTERNAL MEDICAL AUDIT

On August 10, 11 and 12, the University of Colorado Medical Center will present a postgraduate short course on "the medical audit" in Denver. The first of its kind anywhere, this meeting is being presented in recognition of the lively interest that the subject has excited.

One half-day will be devoted to separate concurrent sessions dealing with the special problems and methods of auditing the four major specialties —medicine, surgery, pediatrics and obstetrics. The faculty is to include Kenneth B. Babcock, M.D., Chicago, director of the Joint Commission on Accreditation of Hospitals; Fuller B. Bailey, M.D., Salt Lake City, internist; Madison B. Brown, M.D., Chicago, associate director, American Hospital Association; G. Karl Fenn, M.D., Chicago, director of the Study of Hospital Standards in Medicine, American College of Physicians; John J. Flanagan, S.J., St. Louis, executive director, Catholic Hospital Association; Paul R. Hawley, M.D., Chicago, director, American College of Surgeons; William W. Jack, M.D., Grand Rapids, obstetrician and gynecologist; William H. Kincaid, Ann Arbor, assistant director, Commission on Professional and Hospital Activities, Inc.; Robert S. Myers, M.D., Chicago, executive assistant director, American College of Surgeons; Joseph A. Craven, Denver, hospital legal counsel; Anthony J. J. Rourke, M.D., New Rochelle, hospital consultant; Vergil N. Slee, M.D., Ann Arbor, director, Commission on Professional and Hospital Activities, Inc.; Paul F. Wehrle, M.D., Syracuse, pediatrician; and G. Stanley Woodson, Ann Arbor, biostatistician, Commission on Professional and Hospital Activities, Inc.

The tuition fee will be $35, and payment should accompany advance applications for enrollment. This course is acceptable for American Academy of General Practice Category I credit for the number of hours attended.

Plans are being made for a theater party for registrants at Central City, a historic restored mining town 35 miles west of Denver. Transportation will be provided in a chartered bus, and a current Broadway play will be presented at the famous Central City Opera House.

Registrants should make their own hotel or motel reservations. A deposit of $10 is required to hold such reservations.

Thyroiditis

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THE COMMON TYPES OF THYROIDITIS are Hashimoto's disease, subacute thyroiditis and Riedel's struma. These may be focal or diffuse, and may arise in goitrous or in otherwise normal glands.

It is difficult to assess the frequency of subacute and chronic thyroiditis from medical reports. The reported incidence in patients undergoing thyroidectomy ranges from 0.75 per cent[1] to 8.3 per cent.[2] Hashimoto's thyroiditis is said to be most common, subacute thyroiditis next in frequency, and Riedel's struma rare. Lindsay[3] reported upon 6,571 thyroidectomies, and of his patients 170 had Hashimoto's disease; 23 had subacute thyroiditis; and 2 had Riedel's struma. Woolner[4, 5, 6] reported upon all patients with thyroiditis seen at the Mayo Clinic during 27 years. Of that number, 605 had Hashimoto's disease; 108 had subacute thyroiditis; and 20 had Riedel's struma. The diseases are found in most parts of the world, although they differ in frequency. A variant of Hashimoto's disease has been described in endemic form recently along the U. S. coasts bordering the Gulf of Mexico (Gulf Coast thyroiditis) and the Atlantic Ocean (tidewater thyroiditis).[7] Subacute thyroiditis is rare in England. In our experience at the State University of Iowa Hospitals, subacute thyroiditis has been the most common form, and Riedel's struma has been rare.

HASHIMOTO'S DISEASE

Hashimoto, director of the Hashimoto Hospital, Japan, first described the disease in 1912. The synonyms are *struma lymphomatosa, lymphocytic thyroiditis* and *lymphadenoid goiter*. The word *struma* is derived from the name of the River Struma, which arises in the Bulgarian mountains and flows into the Aegean Sea through a region in which goiter is endemic. Hashimoto's disease appears to have become more common since World War II,[8, 9] although we do not know why.

Pathologically, the gland is enlarged and firm, but does not have adhesions except for occasional thickening of the pretracheal fascia. The surface is smooth and pale pink or yellow-white in color, but the gland may have a pseudolobular appearance. Microscopically, lymphocytes and lymphatic follicles are scattered among the fine fibrous tissues. The acini show uniform degeneration. The epithelial cells are flattened, and their nuclei are dark and eccentrically placed. The acini shrink and coalesce, colloid is scant, and sometimes pseudo-giant cells can be seen.

The etiology of Hashimoto's disease is unknown. During the last four years, there have been two series of pertinent observations concerning the cause. Witebsky and Rose[10] sensitized one rabbit to the thyroglobulin of another. They succeeded in producing iso-antibodies in the second rabbit, and demonstrated these by Boyden's technic,[11] using red cells coated with tannic acid. They next injected a rabbit with an extract of his own thyroid glands, and produced auto-antibodies. Finally, they removed one lobe of a rabbit's thyroid, extracted and injected the thyroglobulin from it, demonstrated circulating antibodies, and one month later removed the remainder of the same thyroid gland. Sections of this remaining lobe showed changes like those of Hashimoto's disease. This work led to a search for antibodies to thyroglobulin in patients with this illness. In 1957, Witebsky and Rose reported that 12 of 18 of their patients had such antibodies.

In a second and independent investigation, Roitt and others noted that the results of the colloidal gold, thymol turbidity and cephalin flocculation tests frequently were positive in this disease. Many patients also have significantly elevated levels of serum gamma globulin. Roitt, Doniach and Campbell[12] suggested that these abnormalities of serum might represent an immunologic response, and subsequently detected precipitins in the sera of seven of nine patients.

Other workers have confirmed both these findings. Auto-antibodies, consisting of hemagglutinins and precipitins, have been found in the sera of most patients with Hashimoto's disease.

Roitt and Doniach conjectured that some mechanism permits the localized release of thyroglobulin from the thyroid follicles. Lymphocytes and plasma cells then infiltrate the gland, and the plasma cells produce antibodies to thyroglobulin. A chain reaction follows: colloid escape, plasma cell reaction, antibody formation, antigen-antibody precipitation within the thyroid follicles, additional epithelial damage, increased leakage of colloid, and so on.[13] Much evidence opposes this concept. Not all patients with Hashimoto's disease have detectable auto-antibodies in the serum. Of 144 pa-

The authors are, respectively, an assistant professor, an associate professor and a professor, all in the Department of Internal Medicine at S.U.I. This presentation was made at the Eighth Annual Fall Meeting of the Page County Medical Society, in Clarinda, on September 16, 1959.

tients reported by Roitt, 109 showed such antibodies. Auto-antibodies can be found in patients with other diseases of the thyroid gland: with subacute thyroiditis; with primary myxedema; occasionally with thyrotoxicosis and non-toxic colloid goiter; and uncommonly with thyroid carcinoma or with Riedel's struma. The auto-immune process may not be automatically self-perpetuating, for antibodies may appear temporarily after subtotal thyroidectomy or after mumps.[14] Antibody which has been labeled radioactively and injected cannot be demonstrated subsequently in the thyroid gland of the monkey. Antibody does not alter the appearance of human thyroid slices *in vitro*.

Circulating auto-antibodies have been found in patients with Hashimoto's thyroiditis and with other thyroid diseases. They accompany the disease process, but may not be causally related. Nobody knows whether auto-immunity is the cause or the result of thyroid disease.

Case 1. A woman of 45 years had noticed a swelling in the neck for 12 months. This had not been preceded by fever, malaise or upper-respiratory infection. The swelling was painless, but there was a sensation of fullness and dysphagia. Her mother and one sibling had goiters. Physical examination showed a healthy woman free of distress and of physical signs of endocrine disturbance. The thyroid gland was symmetrically enlarged, had the consistency of rubber, was non-tender, had a clearly defined contour and was not fixed to surrounding structures. The surface was irregular and felt nodular.

Discussion. Women make up 99 per cent of patients with Hashimoto's disease, and these women commonly are in the childbearing or menopausal ages, although the disease has been recorded in patients from 6 to 75 years of age. The thyroid enlarges slowly, and it is usually about one year before the patient seeks advice, usually for the swelling in the neck. She may complain of a sensation of pressure and fullness in the neck, and occasionally of dysphagia and of hoarseness. Pain is rare. Disturbance of thyroid function is uncommon. A few patients may have hyperthyroidism or hypothyroidism when they are first seen, although many develop myxedema later.[15] Signs of systemic illness, such as fever, raised sedimentation rate, general malaise or weight loss, are rare. The thyroid is usually enlarged to two or three times its normal size. The enlargement tends to be symmetrical, but occasionally only one lobe is involved. The gland is non-tender, and is usually firmer than the average nodular goiter. The surface is irregular, the contour is clearly defined, and the gland is rarely fixed to the surrounding tissues.

Diagnosis is not easy, especially when the enlargement of the gland is asymmetrical or when there is pain or tenderness. In 170 patients reported by Lindsay,[3] a preoperative diagnosis was correct in only 21 per cent. Aspiration biopsy by means of a Silverman needle has been advocated as a "safe, simple and reliable procedure to ascertain the diagnosis." Despite the fact that tissue may be aspirated from the isthmus and both lobes, only a small amount of the gland can be studied by this technic. Hendrick[16] reported upon 89 patients with thyroiditis. In five, aspiration biopsy demonstrated either Hashimoto's disease or subacute thyroiditis, but later carcinoma was found to be present. We believe that aspiration biopsy should seldom be used, and only to confirm the clinical diagnosis.

Thyroidectomy is not indicated by the natural history of the disease. Surgery may be necessary to confirm the diagnosis, for cosmetic purposes or, rarely, because the gland compresses the trachea. Large doses of thyroid—2 to 3 gr. daily—reduce the size of the goiter in two to six months.[9, 17] Carcinoma or lymphosarcoma can coexist with Hashimoto's disease, although this combination is rare. The patient must be seen regularly to ensure that the goiter is regressing.

SUBACUTE THYROIDITIS

Subacute thyroiditis, the second of these three disorders, has come out of the realm of the rare, poorly understood diseases in recent years, and now is recognized by the alert clinician. It is still referred to as granulomatous thyroiditis, giant-cell thyroiditis or DeQuervain's disease, but the term *subacute thyroiditis* has gain popular acceptance.

It has been diagnosed more frequently since the reports of Crile appeared in 1948 and 1950.[18] Nobody knows whether this means an increase in incidence or better diagnosis. This is a self-limited disease that does not kill and formerly may have escaped recognition.

Pathologically, the gland is usually enlarged, often to about two or three times its normal size. Frequently there are a few adhesions to the surrounding tissues. The gland is greyish-white, smooth or slightly irregular, and firm.

Microscopically, there are three features: (1) The few small acini that remain contain cellular debris and little colloid material. (2) The gland is infiltrated with leukocytes, lymphocytes, plasma cells and giant cells. (3) There is fibrosis in whorls, coarse and often hyalinized.

The etiology of subacute thyroiditis is not known. Although the illness bears clinical resemblances to an infective process, there is no evidence that the disease is infectious. Auto-antibodies have been found in the sera of over half of the patients studied. Nobody knows whether this phenomenon is causally related to the disease.

Clinically, subacute thyroiditis varies greatly in severity, from a mild disease to a most severe, prostrating illness. The onset is usually gradual, but may be acute.

We have reviewed 39 patients with subacute thy-

roiditis, followed at the Thyroid Clinic of the University Hospitals, Iowa City.

The patients varied in age from 20 to 68 years (Figure 1), the majority being between 30 and

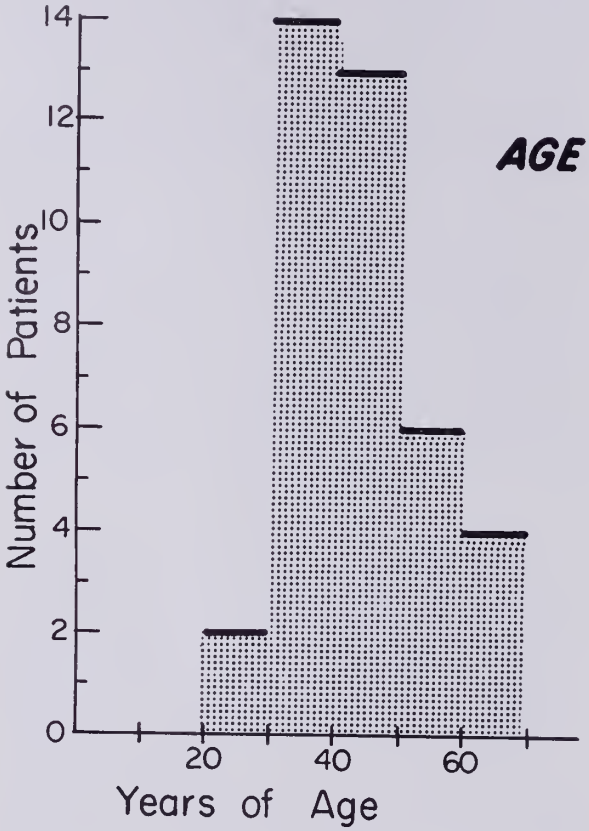


Figure 1. Age distribution of 39 patients with subacute thyroiditis.

50. In this series, there were 32 women and 7 men. The commonest complaint (Figure 2) was pain. Although patients had become aware of a swelling in the neck, pain was not felt in the thyroid gland, but in the neck, jaws or ears. Fatigue was common, and over half of the patients complained of difficulty in swallowing. Chills and fever, weight loss and sweating occurred often. Ten patients had a definite depression, and the same number complained of lassitude and of weakness. Symptoms of anxiety and tension, pharyngitis and hoarseness were less common. Pain in the thyroid gland itself was the least common symptom.

Examination revealed tenderness and enlargement of the thyroid gland (Figure 3). Often the gland was very firm, sometimes suggesting carcinoma. A few patients had signs of hypermetabolism such as tachycardia, tremor, soft moist skin and cardiac overactivity. Only three had cervical lymphadenopathy. The duration of the illness varied (Figure 4.). Some patients recovered within two months, but a few were ill for as long as two

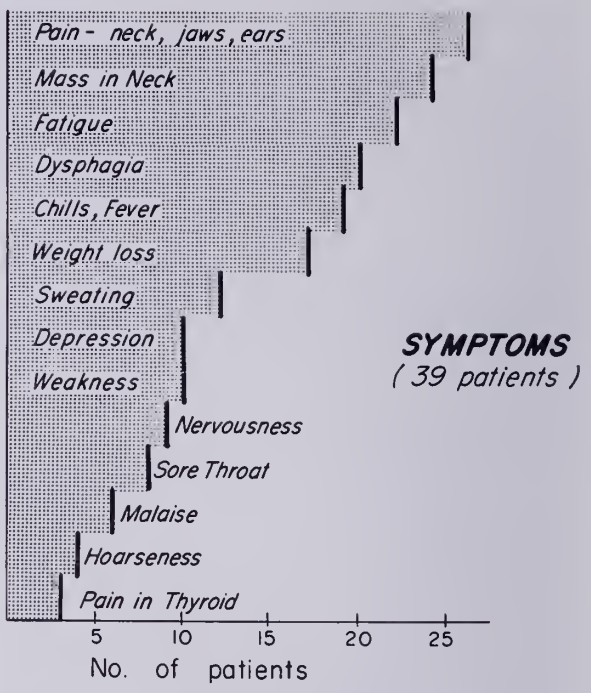


Figure 2. Symptoms in 39 patients with subacute thyroiditis.

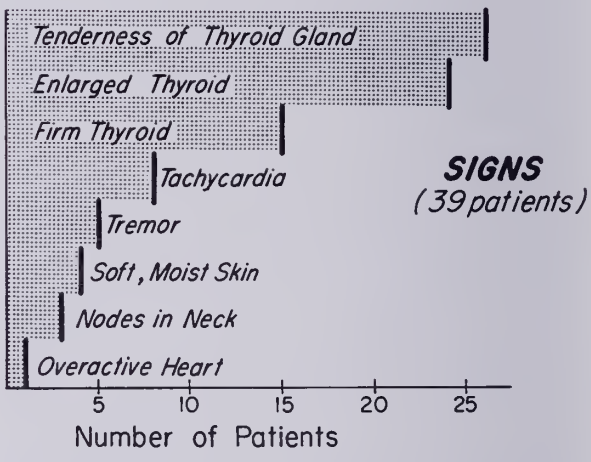


Figure 3. Physical signs in 39 patients with subacute thyroiditis.

years. The mean duration in this series was six months, but 12 patients experienced one or more recurrences of the illness.

This disease may easily escape diagnosis. The onset is often gradual. The general features of fatigue, night sweats, low-grade fever and malaise may overshdow the localizing signs. Anxiety and depression may cause the relatives to seek psychiatric help for the patient. The location of the pain may suggest disease in the teeth, sinuses or ears. The thyroid may not be palpably enlarged, and a localized lesion may escape recognition

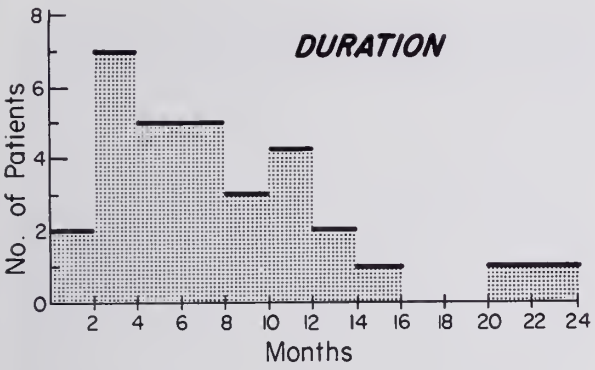


Figure 4. Duration of illness in 39 patients with subacute thyroiditis.

unless the gland is examined with care. Frequently, the patient is misdiagnosed as suffering from other illnesses such as tonsillitis, pharyngitis, sinusitis, abscessed teeth, psychoneurosis, depression or thyrotoxicosis. Many patients with this illness receive treatment for "emotional disturbances."

Laboratory studies help to confirm the diagnosis. The erythrocyte sedimentation rate (E.S.R.) is usually elevated, sometimes to high levels, and is a valuable clue. Significant tests are the uptake of radioactive iodine (I^{131}) and the level of protein-bound iodine in the blood (PBI). In the early stages of the illness, the level of the PBI is usually high, whereas the I^{131} uptake is low.[19] The white blood cell count is rarely increased significantly.

The changes in the laboratory findings may be more easily appreciated if the damage to the thyroid gland is understood. In severely ill patients, the protein-bound iodine level and the basal metabolism rate are elevated because of the loss of colloid from the follicles into the circulation. At the same time, the damaged cells do not concentrate iodine, and the uptake of radioactive iodine is low. At this stage, circulating thyroxin may induce a state of hypermetabolism similar to thyrotoxicosis. Later, the gland becomes depleted of colloid, and the serum protein-bound iodine falls to normal or subnormal levels. With recovery, the uptake of radioactive iodine increases first, and the protein-bound iodine level follows later. In mildly ill patients, the protein-bound iodine level may remain within normal limits throughout the course of the disease, and the initially low uptake of radioactive iodine may return to normal within a few weeks. In a few patients, the uptake of radioactive iodine remains normal throughout. The best indices of recovery are the sedimentation rate and the radioactive iodine uptake.

Case 2. A 29-year-old housewife was admitted to the University Hospitals with sore throat and fever. Three months before admission, there had been a gradual onset of sore throat, malaise, weakness, occasional fever and night sweats. Pharyngitis had been diagnosed, and she had been given three antibiotics without improvement. Anxiety and depression had developed, and had been treated symptomatically but ineffectively. During the week before admission, the illness had become more severe, with high fever, generalized headache, dry cough, arthralgia and weight loss.

Upon admission, physical examination showed a patient who was acutely ill, with a remittent fever of 104°F. and a pulse rate of 110. The abnormal physical signs were limited to the neck. The thyroid was enlarged, firm and tender, and the pain was accentuated upon movement of the neck. There was no lymphadenopathy. The hemoglobin was 13 Gm. per cent, and the white blood cell count was 8,000 with a normal differential. The eosinophil sedimentation rate was 55 mm. in one hour. After admission (Figure 5), the protein-bound iodine was 9 micrograms per cent, the I^{131} uptake was 2.7 at 24 hours. X-ray therapy was followed by clinical recovery within a few days. Later, the P.B.I. was low, and there was dryness of the skin and retardation of the alternate motion rate. Although no treatment for hypometabolism was given, the patient made a complete clinical and laboratory recovery in a few weeks. She has since been well.

Case 3. Several days after an apparent recovery from a cold, a 33-year-old man had a gradual onset of pain in the neck, aggravated by swallowing. The pain radiated to the middle ear. There were fever, chills and sweats. After several days, he consulted an otologist because of pain in his ear. The patient's thyroid gland was found to be asymmetrically enlarged, hard and containing areas of exquisite tenderness. Penicillin failed to alter the course of the disease. For many days the pain migrated from one part of the gland to another.

Laboratory studies (Figure 6) showed that the protein-bound iodine was 6.25, the I^{131} uptake was 2 and 5 per cent at four and 24 hours, respectively, and the eosinophil sedimentation rate was 63 mm./hr.

X-ray therapy, consisting of 200 r to each side of the gland, was given daily for three days. By the fourth day, the pain had disappeared completely, and recovery from the systemic effect was complete in a few more days. Following treatment and recovery, the sedimentation rate returned to normal. During recovery, although laboratory values were compatible with hypothyroidism, clinical signs of myxedema were not elicited. All laboratory values returned eventually to normal, and the patient recovered fully.

Discussion. One should not diagnose myxedema in a patient recovering from subacute thyroiditis simply because of a lowered basal metabolic rate or protein-bound iodine rate. The decrease in the P.B.I. to low levels in the recovery phase is a part of the natural course of the disease, irrespective of treatment. The clinical signs of myxedema ap-

pear rarely, and usually a return to normal function can be expected without the aid of exogenous thyroid substance.

Subacute thyroiditis is self-limiting, and patients recover without therapy, although they may be ill for several months. Prompt treatment reduces morbidity and seems to hasten recovery. Two forms of therapy appear effective. Either adrenocortical steroids or x-ray treatments reduce the symptoms in a few days, and suppress all the signs of clinical illness within two weeks. Recurrences may follow either steroids or x-rays.[20] At this time, there is no evidence to indicate that one form of therapy is better than the other. Theoretically, steroids might be expected to suppress auto-immune reactions within the gland. In practice, we believe, patients who receive a combination of x-ray and steroid therapy are least likely to have recurrences.

RIEDEL'S STRUMA

This disease is rare, and its etiology is unknown. Pathologically, all or part of the thyroid gland becomes replaced by fibrous tissue having the consistency of soft wood. This fibrous tissue may involve all the structures in the neck, except the skin, from the base of the skull to the thorax. The gland is fixed to the surrounding structures. Microscopically, no acini can be seen in the involved areas. There is dense fibrous tissue throughout.

The disease occurs between the ages of 30 and 60. About 70 per cent of patients are women. The symptoms are pressure, dyspnea, dysphagia, pain and hoarseness. Physical examination shows a hard, fixed gland, without lymphadenopathy. Uncommonly, hypothyroidism develops.

The differential diagnosis from carcinoma can be made only on histological grounds, and demands evidence of replacement of the thyroid by fibrous tissue which invades the surrounding structures. Consequently, surgical biopsy is mandatory.

Treatment is difficult. X-ray therapy and cortisone have both been reported ineffective. Thyroidectomy is often impossible because of the dense, hard fibrosis in and around the gland. The most successful operation is wedge resection of the isth-

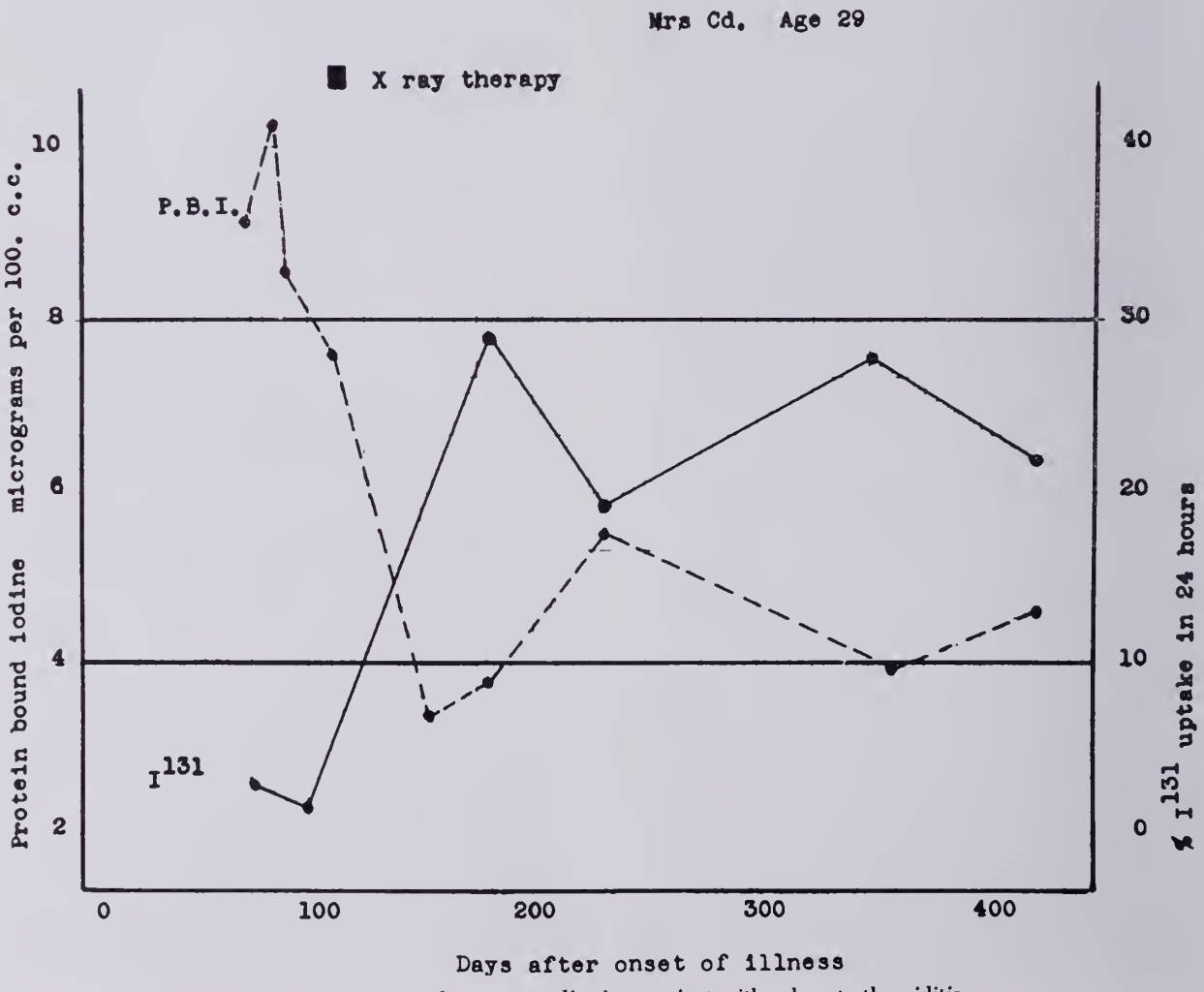


Figure 5. Case 2. Laboratory studies in a patient with subacute thyroiditis.

mus of the gland, to remove all of the isthmus and those parts which adhere to the trachea, thereby relieving the constriction of the trachea and thyroid cartilage.[21]

CONCLUSIONS

We have described the three common types of thyroiditis. Some experts have suggested that the three represent a progression of the same disease, but the clinical evidence opposes this concept. Hashimoto's disease, subacute thyroiditis and Riedel's struma differ in incidence, in clinical features and in response to therapy. The three disorders have one feature in common: they can be recognized only if one's index of suspicion is high.

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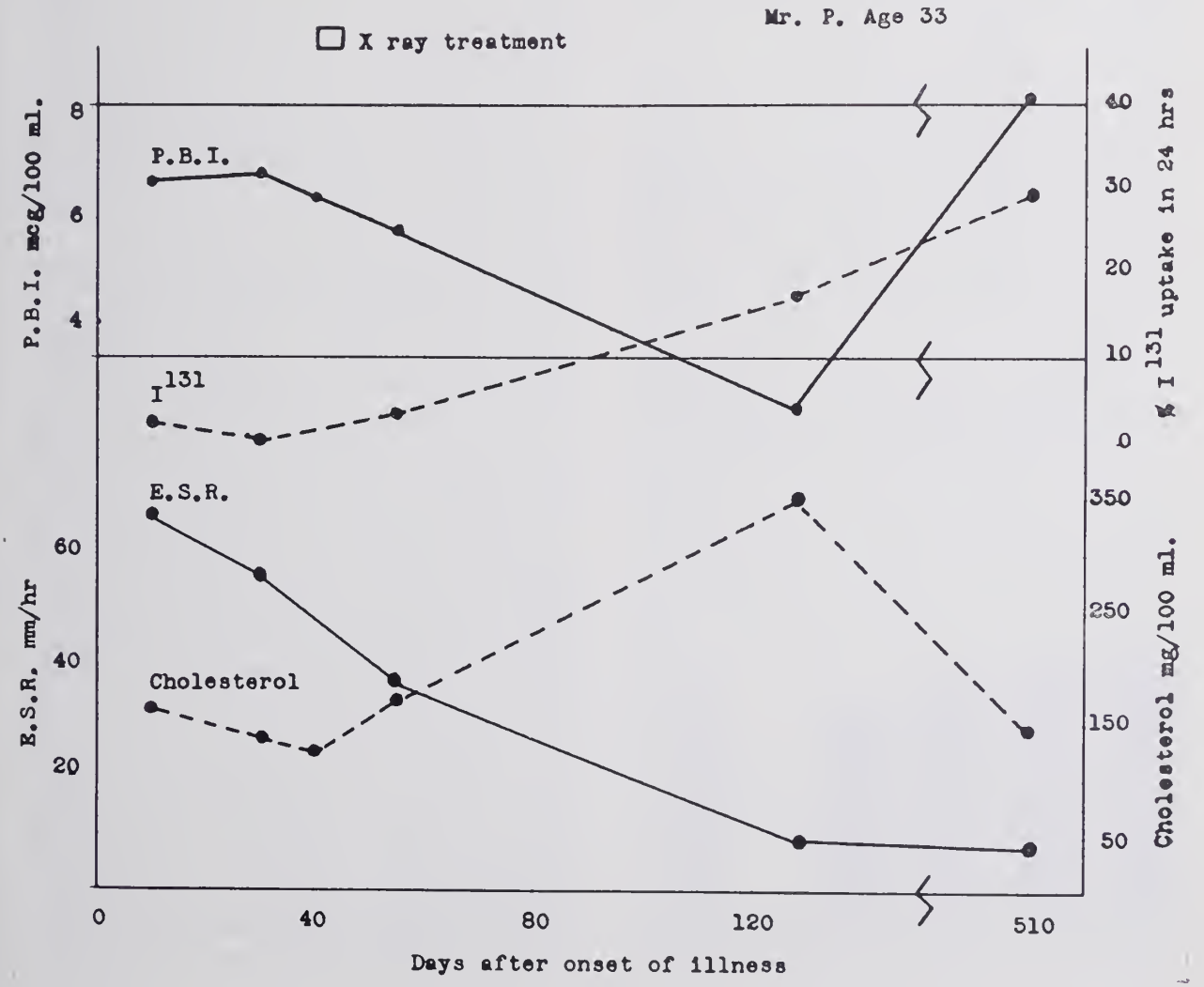


Figure 6. Case 3. Laboratory findings in a patient with subacute thyroiditis.

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Survey of Perinatal Statistics in Iowa

MADELENE M. DONNELLY, M.D., M.P.H.

DES MOINES

THE IOWA STATE DEPARTMENT OF HEALTH, through its Divisions of Maternal and Child Health and Vital Statistics, has been more than willing to cooperate and assume leadership in the development of perinatal death studies. However, our approach has been somewhat unique, and I should like to outline it and show how we are implementing our studies.

First allow me briefly to point out a few of the characteristics of the demography of the state which influence natal studies.

Iowa is a Midwestern state with a population of 2¾ million people, whose residences are almost equally divided between urban and rural. There are about 900 incorporated municipalities, fewer than 100 of which have populations of over 2,500. Only 23 cities have populations of over 10,000. The non-white population is less than 1 per cent. Iowa has one of the heaviest concentrations in the United States of people 65 years of age and older. Per capita income is fairly high, and industry has been moving in and displacing agriculture as a source of income. Large groups of indigent people are found in only a few of the larger cities. There are 148 hospitals scattered throughout the state, with 50 located in the 23 cities whose populations are over 10,000. Only three hospitals in the state have planned programs for the hospitalization of indigent people: the University Hospital at Iowa City, College of Osteopathy Hospital in Des Moines, and Broadlawns County Hospital in Des Moines. In all other hospitals, patients are admitted and treated on a private basis.

Because the scope of events in any one hospital is so small, we felt that we should analyze natal statistics at a state level to give a firm background for comparative studies. This we have done, over a six-year period which includes 382,981 live number of births, 4,981 fetal deaths (all having reached the twentieth week of gestation), and 6,127 deaths occurring within the first 28 days of life.

In addition to the total analysis, hospitals have been grouped in the standard method by annual births, and rates were computed for each group. Rates from an individual hospital may then be compared not only to the state rate but also to the rates of other hospitals handling about the same volume of maternity cases. We feel that before the staff of any given hospital undertakes a perinatal death study, it should closely review the complete report of the maternity and newborn section of that institution and compare it to statewide studies.

All rates have been calculated on the basis of 1,000 total births, and no effort has been made to correct or adjust them. In some of our tables, we have simplified numbers by rounding to the nearest digit. We have been obliged to omit some of our findings because of time limitations, and have tried to present the points having the greatest common interest. Further discussion would include more technical information about cause of death, length of life or autopsy reports. This material is available, but is not included in this paper.

Table 1 presents an overall picture of the perinatal deaths. There has been very little change in this six-year period, except that the rates were a little higher in the first and last years than in the intervening ones. The classical fetal and neonatal rates have been carried to help orient those who have not yet become familiar with the use of the term *perinatal*. The birth rate has not fluctuated much during this study.

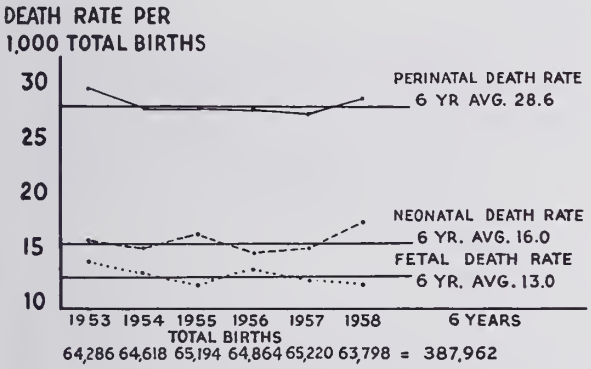
As I said before, the population is about evenly divided between rural and urban. This holds true among our parturient women. In Table 2 we see that 96 per cent of all mothers are residents of the state—49 per cent urban and 47 per cent rural. As the birth order of the infant increases, there is a steady shift in the residence of the mother. This phenomenon might be interpreted in either of two

Dr. Donnelly, the director of the Division of Maternal & Child Health in the Iowa State Department of Health, made this presentation to the Maternal and Child Health and Statistical Sections, and the American Association for Vital Records and Public Health Statistics, on October 20, 1959.

TABLE 1

NATAL STATISTICS
IOWA 1953-1958

Births	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*Total*
			Year				
Live Births	63,384	63,776	64,414	63,981	64,411	63,015	382,981
Fetal Deaths	902	842	780	865	809	783	4,981
Total Births	64,286	64,618	65,194	64,846	65,220	63,798	387,962
Death Rates							
Neonatal	16.2	15.5	16.7	15.2	15.5	16.9	16.0
Fetal	14.2	13.2	12.1	13.5	12.6	12.4	13.0
Perinatal	30.0	28.4	28.4	28.3	27.7	29.0	28.6



ways: one, that rural parents have larger families, or two, that when the size of the family starts to increase, parents move to smaller communities. This latter is of interest in relation to continuity and availability of medical care in the smaller communities.

About 75 per cent of all mothers are residents of the county in which they are delivered. A variation from this figure gives us a clue to the amount of referred cases in a given hospital.

We have all been aware of the increase of marriages in the group under 20 years of age. In 1953 just 9 per cent of all mothers were under 20, but in 1958 there were 12 per cent under 20. This represents an increase of ⅓ over 1953, and actually means that more than 7,000 new mothers in 1958 were under 20 years of age. Deep concern is felt about the preparation of these young people for parenthood. They are neither physically nor emotionally mature, and what little information we have about adolescent nutrition indicates that it is not good (Table 3).

From the beginning of record-keeping in Iowa until 1950, there were always more first-born children than second-born. That preponderance has commonly been accepted as an indication of hard times. Back in the 30's there were almost 300 first-born children for every 225 second-born, and during the early 40's there were about 350 first-born for every 250 second-born. During this same dec-

TABLE 2

DISTRIBUTION OF ALL BIRTHS
BY RESIDENCE AND BIRTH ORDER
IOWA 1953-1958

Birth Order	*Residence* *Rural (Less Than 2,500 Pop.)*	*Urban (2,500 & Over Pop.)*	*Out of State*
	RATE PER 1,000 BIRTHS		
1st Child	418.9	537.7	43.4
2nd Child	456.4	505.2	39.4
3rd Child	489.5	473.8	36.7
4th + Child	536.8	425.5	37.7
Total	473.3	487.3	39.4

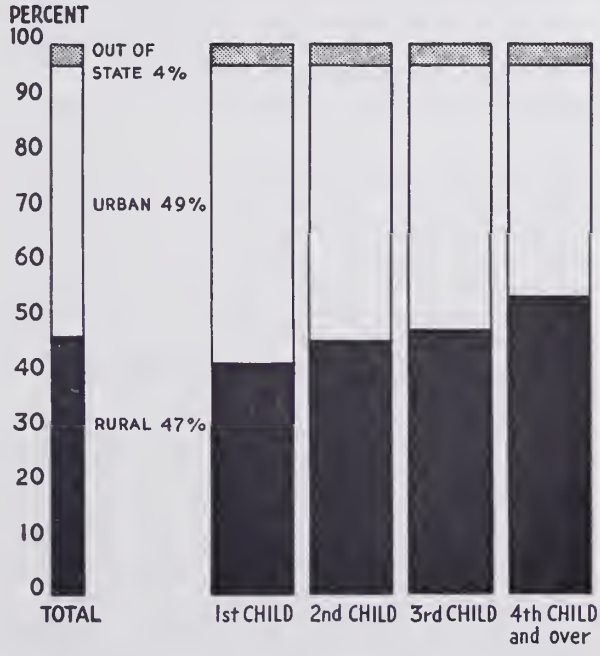
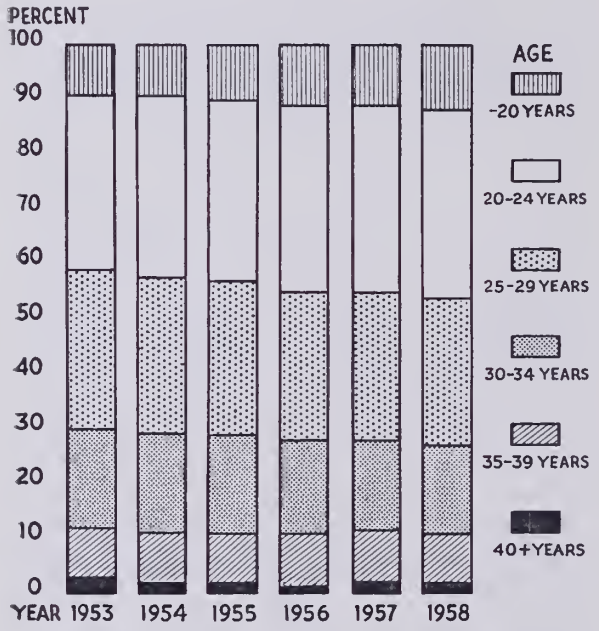


TABLE 3

DISTRIBUTION OF ALL BIRTHS
BY AGE GROUP OF MOTHER
IOWA 1953-1958

Age Group	Year 1953	1954	1955	1956	1957	1958	Total
	RATE PER 1,000 BIRTHS						
Under 20	94.5	94.9	99.8	105.2	109.2	112.3	102.7
20 - 24	324.3	330.3	329.3	336.1	337.1	344.9	333.7
25 - 29	288.1	282.9	280.8	273.8	272.7	268.4	277.8
30 - 34	177.6	177.5	176.7	170.9	165.9	163.2	171.9
35 - 39	87.3	87.6	87.9	88.6	87.7	85.7	87.5
40 & Over	26.9	25.7	25.1	24.6	27.3	24.7	25.7
Not Stated	1.2	1.1	0.5	0.8	0.8	0.8	0.7



ade, children who had fourth or greater birth rank in a family were as infrequent as 175 per 1,000. In 1950 second-born children exceeded first-born, and this situation continued until 1957 when again we had more first-born (Table 4). This change might be interpreted as being an indication of financial stress except that during this period there were more and more children born in fourth or higher rank and in 1958 this group comprised ⅓ of all births.

In Table 5 we have distributed all mothers by both age and birth order of the infant. For clarity, we have shown percentages. Here, we can pick out largest groups and make note of those groups that are apt to have the most trouble in the birth period, areas of greater susceptibility and areas needing more concentrated care.

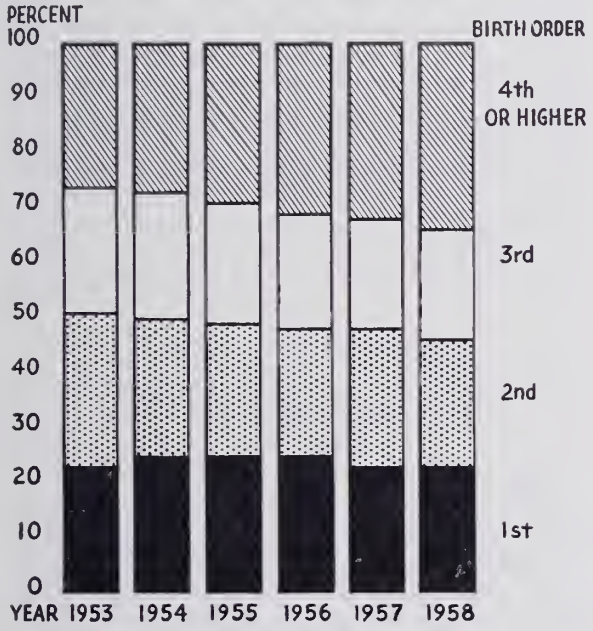
In Table 6 we have outlined the perinatal death rates in the various age groups for the various birth orders. This surely demonstrates that these losses are higher in certain age and parity groups. When we compare the rate for an individual hospital, we first look to see whether or not this hospital has any unusual predominance of mothers in any of the brackets tending to have high death rates. For example, one of our larger hospitals usually has a higher than average perinatal death rate. In reviewing the records of that institution, we find that less than 40 per cent of the mothers are residents of the county, a circumstance that is indicative of referral of complicated cases, and that 16 per cent of the mothers are under 20 years of age, a figure that is appreciably more than average. These two items can alert us to the possibility of a higher perinatal loss in this particular hospital.

In Iowa, nearly all mothers are delivered by physicians. Actually, in the six-year period only 113 mothers were not attended by physicians. about 4 per cent of all deliveries were done by osteopathic physicians, and the remainder by medical physicians. Over 70 per cent of all mothers report to the physician in the first trimester of pregnancy. However, there is a great variation when we calculate this on the various birth orders, for we see that as the mother has more children, she delays her visit to the doctor more and more (Table 7). Of course we are the first to admit that the amount of medical care is not necessarily an index of the quality of care received, but we have used this as a take-off point in teaching doctors and nurses about prenatal care. In 1953, we started working with our public health nurses,[6] asking them to concentrate on the multiparous patient, and it would seem that we have achieved some results. In addition, when we have had an opportunity to talk to physicians, we have stressed the need for early prenatal care if we are to maintain a good quality of care. A paper from the Division of Maternal & Child Health of the Iowa State Department of Health on "Prenatal Test for Erythroblastosis"[8] reviewed 35 cases of erythroblastosis fetalis treated in one hospital in a year. The three fatalities in this group occurred in mothers who had not been tested for Rh or had had the Rh test done in a doctor's office in a glass slide—a non-ac-

TABLE 4

DISTRIBUTION OF ALL BIRTHS
BY BIRTH ORDER
IOWA 1953-1958

Birth Order	*1953*	*1954*	*1955*	*1956*	*1957*	*1958*	*Total*
			Year				
			RATE PER 1,000 BIRTHS				
1st Child	244.5	247.3	252.1	244.8	241.4	235.1	244.4
2nd Child	280.2	266.5	254.2	243.0	235.0	230.6	251.6
3rd Child	215.4	213.3	211.8	201.5	198.9	197.8	206.4
4th + Child	257.2	270.1	281.3	307.5	321.6	333.9	295.2
Not Stated	2.7	2.8	0.6	3.2	3.1	2.6	3.4



ceptable method. Pointing out such facts to physicians does stimulate them to review their own practices.

At the present time, 99 per cent of all deliveries in Iowa occur in licensed hospitals. I am sure that the rapid swing to hospital deliveries was universal, and we need do no more than mention it. Table 8 points out what in my mind is one of our largest problems—that 58 per cent of all births are crowded into 25 per cent of the hospitals. The remaining 48 per cent of all deliveries are spread out among 75 per cent of the hospitals. This means that only one out of four hospitals maintains an average obstetrical census that warrants the employment of qualified, specialized personnel. The average daily census was computed by taking the hospital with the largest number of deliveries and the hospital with the fewest deliveries in each group, and calculating the average daily census on the basis of a five-day maternity stay.

In each of the other 75 per cent of the hospitals, there is probably no pediatrician or pediatric nurse. We know that there are no anesthesiologists in these hospitals, and that more than half of obstetrical anesthetics are inhalants, given by registered nurses with no anesthetic training, or by aides or LPN's. The fact that a hospital has a large enough case load to warrant employment of a good staff does not necessarily solve the problem, however, for most of these hospitals are grossly overcrowded. For example, one hospital is now handling 3,000 deliveries annually in the same space where the staff was crowded in 1955 with 2,000 deliveries.

We have been most interested in the type of delivery done in Iowa. [1-3] Surveys have been report-

TABLE 5

DISTRIBUTION OF ALL BIRTHS
BY AGE OF MOTHER AND BIRTH ORDER
IOWA 1953-1958

Age of Mother	*1st Child*	*2nd Child*	*3rd Child*	*4th + Child*
	Birth Order			
	RATE PER 1,000 TOTAL BIRTHS			
Under 20	75.9	21.6	4.2	0.7
20 - 24	117.1	120.0	63.1	32.7
25 - 29	34.8	71.9	77.7	92.8
30 - 34	11.1	26.8	42.1	91.4
35 - 39	4.2	9.1	15.9	58.1
40 & Over	1.0	2.0	3.4	19.2

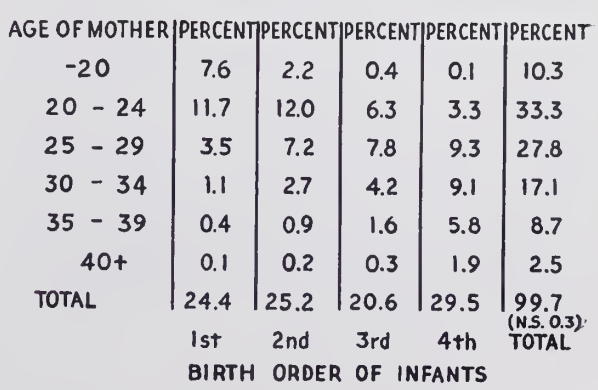
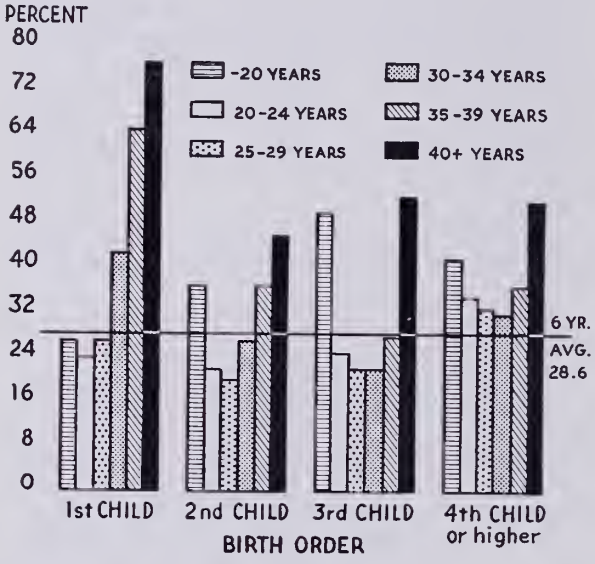


TABLE 6

PERINATAL DEATHS
BY AGE OF MOTHER AND BIRTH ORDER
IOWA 1953-1958

Age of Mother	Birth Order 1st Child	2nd Child	3rd Child	4th + Child	Total
	RATE PER 1,000 TOTAL BIRTHS				
Under 20	27.3	36.1	51.4	49.2	30.7
20 - 24	23.7	22.1	26.4	34.8	25.0
25 - 29	27.4	20.2	23.0	32.8	25.8
30 - 34	43.1	27.4	24.1	31.7	30.2
35 - 39	65.0	37.0	30.5	37.3	37.7
40 & Over	76.7	47.1	56.9	51.5	52.1
Total	27.3	24.2	26.0	34.4	28.6

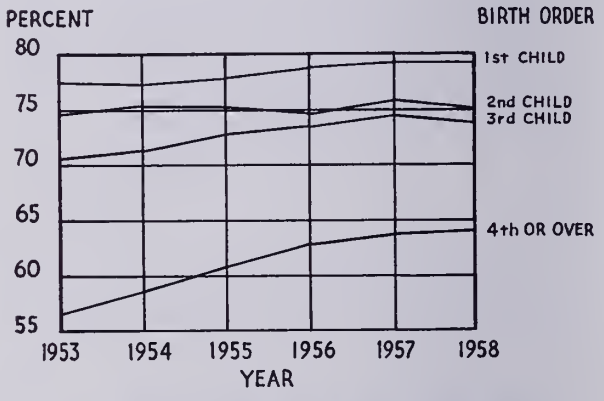


ed throughout the past 10 years, and the type of delivery done has been quite uniform. In 1952, we found about 20 hospitals with excessively high cesarean rates. I do not believe we are fair when we calculate perinatal deaths on the basis of type of delivery, since frequently a surgical delivery is elected because the fetus is already in trouble. However, we did find that both the perinatal and maternal losses in these hospitals with excessively high cesarean rates were higher than average. On the other hand, the hospitals with extremely low section rates also had an elevation of death rates, though not as high as in the high-section-rate hospitals. During this six-year period, many of these hospital staffs have reviewed their surgical policies and have attempted to reduce high operative rates —most of them quite successfully. The section rate in one hospital was 100 per 1,000 births in 1949. Through the efforts of the staff, this rate had been cut to 50 per 1,000 by 1958.

TABLE 7

DISTRIBUTION OF MOTHERS EXAMINED BY
PHYSICIAN IN FIRST TRIMESTER OF
PREGNANCY
IOWA 1953-1958

Birth Order	Year 1953	1954	1955	1956	1957	1958
	RATE PER 1,000 TOTAL BIRTHS					
1st Child	774.2	773.0	777.0	788.8	792.6	792.1
2nd Child	749.5	752.2	753.7	748.9	758.1	750.9
3rd Child	705.9	712.6	727.5	733.6	744.5	739.9
4th + Child	565.3	585.1	607.6	629.3	639.7	640.0
Total	695.3	703.4	712.9	717.1	725.4	721.3



In Table 9, we see that there is a remarkable similarity in types of delivery in all hospital groups. If one were to accept the premise that low or perineal forceps are non-operative, he could say that only 5 per cent of all deliveries are operative, with a slight increase in the small hospital. Here it is apparent that the general practitioner doing only a few deliveries a year has more confidence in a surgical delivery than in chancing a difficult forceps technic. In Table 10, we see again that actual operative deliveries occur in 5 per cent of deliveries regardless of birth order, with about the only variation being the increased use of high or mid-forceps in primiparous women.

We finally come to the distribution of infants by birth weight. In Table 11 we have the births by weight, with the numbers at the bottom of the table representing 500 Gm. weight groups, "2" representing 1,000-1,499 Gm., and "9" representing 4,500 Gm. or more. I am sure that this distribution is not unusual. It is apparent that the predominance of infants under 2,000 Gm. and over 4,500 Gm. increases with the birth order.

In watching birth weights, we are frequently amazed at the variations found in some hospitals. In many of the small rural hospitals, there are few

TABLE 8

CONCENTRATION OF DELIVERIES IN VARIOUS HOSPITALS GROUPED BY SIZE OF MATERNITY SERVICE IOWA 1953-1958

Annual Number of Deliveries	Hospital Group: *Group E* 1,000 & Over	*Group D* 500-999	*Group C* 250-499	*Group B* 100-249	*Group A* Under 100
Number of Hospitals	14	24	46	47	21
Per Cent of Hospitals	9%	16%	30%	32%	13%
Total Deliveries (Six Years)	119,519	103,764	101,600	48,035	6,513
Per Cent of All Deliveries	31%	27%	26%	13%	2%
Average Daily OB Census	34-14	13-7	6-4	3-2	1 or less

infants born who weigh less than 2,500 Gm. Changes in the usual patterns of birth weights ring an alarm bell. For example, we have a rural hospital with a maternity service of 700 deliveries a year. Medical practices there have always been conservative and perinatal death rates low, running between 19 and 24. In 1957, the perinatal death rate there jumped to 38.3, and in 1958 it was 35.3. Looking at the record of that hospital, we find that its incidence of infants with birth weights of less than 1,000 Gm. was about 5 per 1,000. In

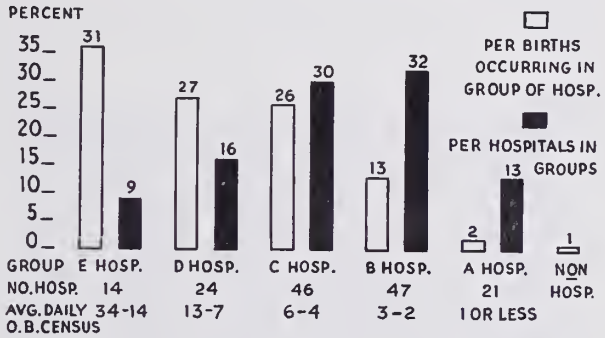
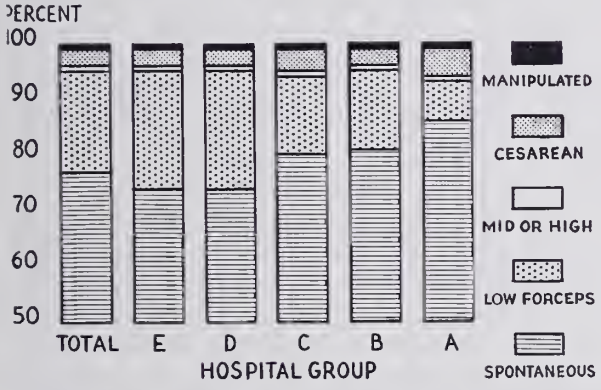


TABLE 9

DISTRIBUTION OF BIRTHS BY TYPE OF DELIVERY AND HOSPITAL GROUP IOWA 1953-1958



1955 and 1956 it rose to 7, then in 1957 to 17.8, and in 1958 to 19.1. What has happened? Is this preventable, or is it not? We have not yet had an opportunity to visit that hospital, but a further study will be done. In another hospital, we were asked to come in and review an increase in perinatal deaths. There, the increase was in infants weighing between 1,500 and 2,499 Gm. at birth. We found our answer in the excessive use of elective inductions that had resulted in the delivery of premature babies. Changes of policy on the part of the medical staff have corrected this situation.

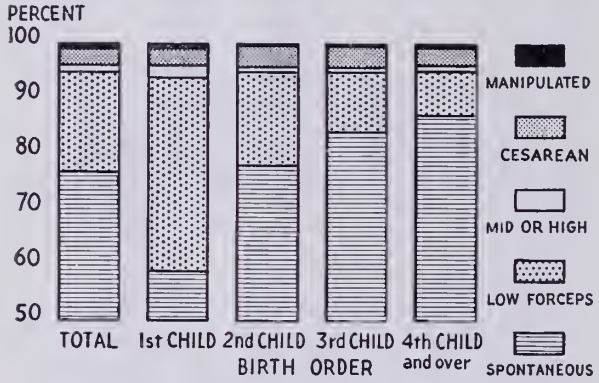
In Table 12 we have emphasized two variations in weight which influence perinatal loss. Multiple births contribute 20 per cent of all birth weights

Deliveries Per Year	Hospital Group: *Group E* 1,000+	*Group D* 500-999	*Group C* 250-499	*Group B* 100-249	*Group A* −100
	RATE PER 1,000 DELIVERIES				
Type of Delivery					
Spontaneous	743.0	737.7	801.8	818.0	849.3
Low Forceps	206.6	210.8	144.4	138.9	86.0
Mid or High Forceps	6.9	8.1	8.5	7.1	11.1
Cesarean Section	35.2	35.1	36.2	29.6	50.1
Manipulation	8.0	7.9	8.9	6.4	3.2
All Other	0.3	0.4	0.2	0.1	0.3

TABLE 10

DISTRIBUTION OF BIRTHS
BY TYPE OF DELIVERY AND BIRTH ORDER
IOWA 1953-1958

Type of Delivery	*Birth Order*				
	1st Child	*2nd Child*	*3rd Child*	*4th + Child*	*Total*
	RATE PER 1,000 DELIVERIES				
Spontaneous	588.4	778.1	837.3	871.3	771.6
Low Forceps	356.2	171.9	113.7	81.6	178.1
Mid or High Forceps	16.4	5.4	4.6	4.8	7.7
Cesarean Section	31.1	38.0	37.1	32.4	34.5
Manipulation	7.6	6.4	7.1	9.9	7.9
All Other	0.3	0.1	0.2	0.0	0.2



under 2,500 Gm. and 20 per cent of all perinatal deaths in Iowa.[4] Multiple births occur with a regular frequency, increasing with birth order. The more a physicians thinks about the possibility of multiple gestation, the earlier he will diagnose the condition. Earlier diagnosis can result in more intensive prenatal care aimed at prolonging the gestation.

From prematurity, we look to the heavy babies, which also occur more frequently in the multiparous mother. We are hoping to do some studies in this area, but feel that the racial stock in Iowa may be more responsible for large babies than is diabetes. In some of our rural hospitals, especially in areas thickly populated by Dutch people, it is hard to realize that one is looking at newborn infants when he looks into a newborn nursery. I have been in hospitals time and again when no newborn in the nursery weighed less than 9 lbs.

Table 13 pictures the death rates on the basis of birth weight. Again, I am sure that this curve is not unusual.

When we review a hospital, we are always interested in checking salvage in the various weight groups. One does not expect too much in birth weights of less than 1,500 Gm., but salvage should improve from 1,500-1,999 Gm. and should be fairly good in weights over 2,000 Gm. One thing about many of the small rural hospitals is that they do not have many small babies,[5] but in too many of these hospitals none of the babies weighing under 1,500 Gm. survive, and the death rate is as high as 750 per 1,000 in the group weighing between 1,500 and 2,499 Gm. It is apparent that some of these small hospitals are totally unprepared to cope with the management of premature infants.

One of our concerns has been the increase of elective inductions,[7] particularly in the smaller hospitals where there may be no one particularly trained in the skills of caring for newborn infants. It has been our feeling that most physicians think that a fetus is ready for outdoor life after 36 weeks of gestation. Table 14 shows the actual variation of perinatal death rates between infants delivered at 37-39 weeks' gestation, and those delivered at 40 or more weeks.

CONCLUSIONS

This has been a brief summary of the problems of perinatal loss as we see it in a Midwestern state. Here, perinatal death studies must be done in such a way as to provide education for the trained and the untrained, for the physician and the nurse, for the hospital administrator and the board member. We cannot visualize such a program as one being done by a gathering of minds in an ivory tower.

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TABLE 11

DISTRIBUTION OF ALL BIRTHS BY BIRTH WEIGHT AND BIRTH ORDER, IOWA 1953-1958

Birth Weight	*Birth Order*				
	1st Child	*2nd Child*	*3rd Child*	*4th + Child*	*Total*
	RATE PER 1,000 BIRTHS				
− 1,000 Grams	6.3	5.3	6.0	7.7	6.4
1,000 - 1,499	6.8	6.6	5.6	6.7	6.6
1,500 - 1,999	13.0	11.8	10.2	13.0	12.1
2,000 - 2,499	44.1	37.0	35.5	39.8	39.3
2,500 - 2,999	177.5	149.9	137.0	130.7	148.4
3,000 - 3,499	403.4	373.8	358.4	324.2	363.4
3,500 - 3,999	278.3	311.7	319.8	321.1	307.2
4,000 - 4,499	62.0	89.5	106.6	123.7	96.5
4,500 + Grams	8.6	14.4	20.9	33.1	19.9

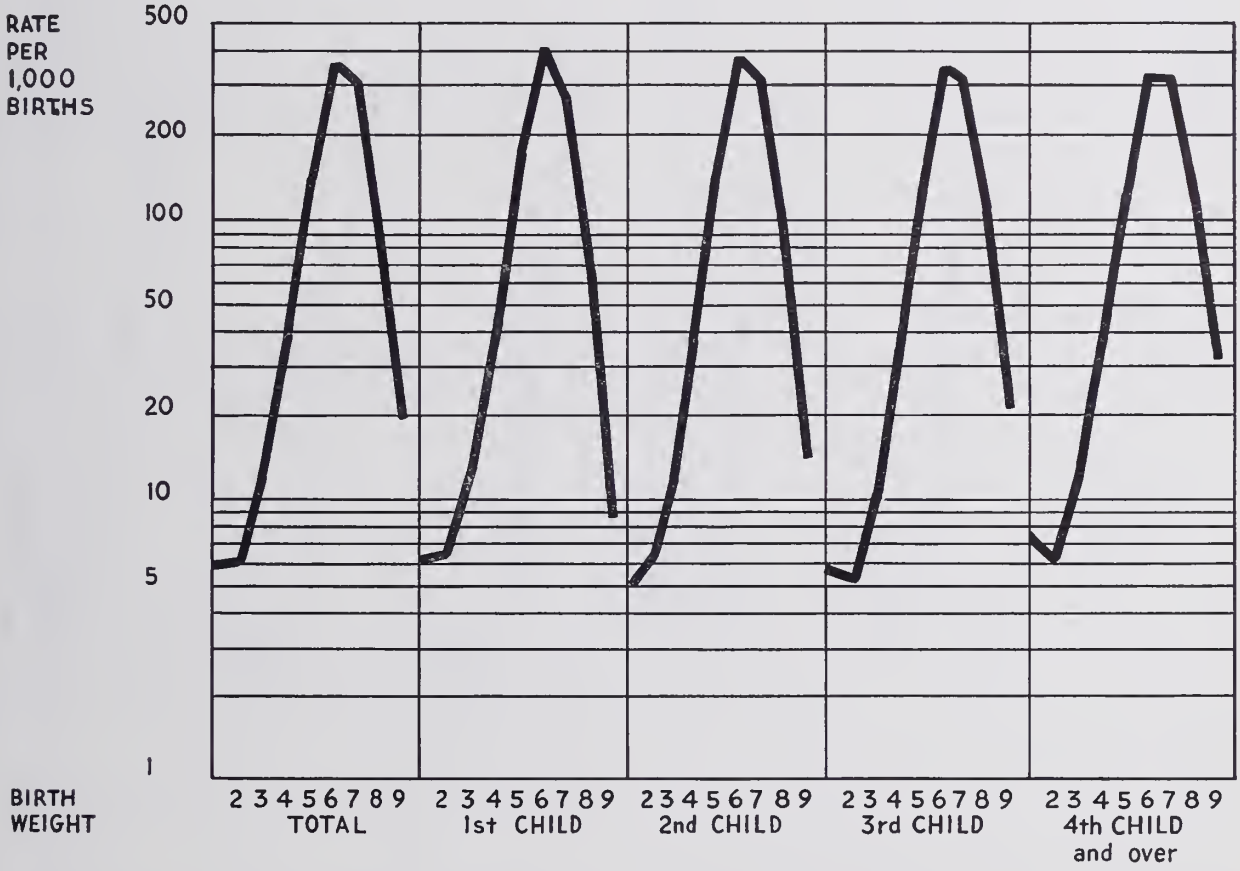


TABLE 12

SOME OTHER VARIABLES WHICH INFLUENCE PERINATAL LOSS, IOWA 1953-1958

Birth Order	*Multiple Births*	*Birth Weights Over 4,500 Grams*
	INCIDENCE PER 1,000 TOTAL BIRTHS	
1	7.6	8.6
2	16.4	14.5
3	22.8	22.0
4+	35.7	33.2
Total	21.3	19.8

TABLE 13

PERINATAL DEATHS BY BIRTH WEIGHT AND BIRTH ORDER, IOWA 1953-1958

Birth Weight	*Birth Order*				
	1st Child	*2nd Child*	*3rd Child*	*4th + Child*	*Total*
	RATE PER 1,000 BIRTHS				
— 1,000 Grams	946.2	904.7	923.9	933.9	921.5
1,000 - 1,499	658.4	710.9	710.1	690.9	693.4
1,500 - 1,999	269.9	303.0	313.0	338.9	308.6
2,000 - 2,499	73.6	82.2	101.9	104.4	80.3
2,500 - 2,999	18.4	18.2	23.1	32.9	23.4
3,000 - 3,499	8.8	8.1	9.4	14.5	10.4
3,500 - 3,999	7.9	4.9	6.5	8.7	7.3
4,000 - 4,499	12.3	7.2	5.6	10.7	9.1
4,500 + Grams	33.2	11.3	17.7	29.2	25.6
Total	27.3	24.2	26.0	34.4	28.6

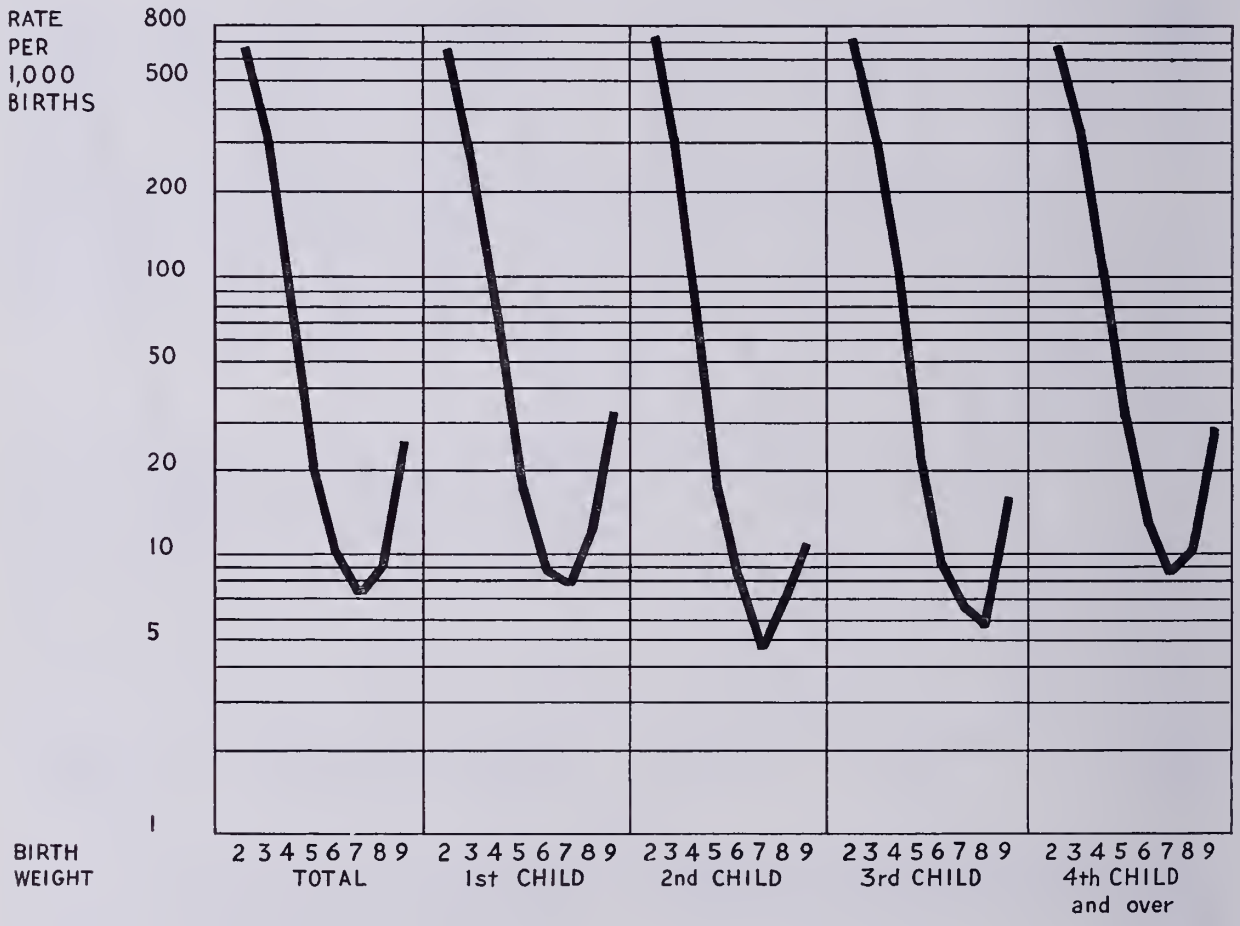


TABLE 14

PERINATAL DEATHS BY WEEKS OF GESTATION, IOWA 1953-1958

Weeks Gestation	*Year*						
	1953	*1954*	*1955*	*1956*	*1957*	*1958*	*Total*
	RATE PER 1,000 BIRTHS						
37-39	20.9	19.3	20.8	21.9	21.5	20.6	20.8
40 and Over	9.3	9.8	9.3	9.8	9.2	9.5	9.5

The Treatment of Acute Renal Insufficiency With Special Reference To The Artificial Kidney

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IOWA CITY

ACUTE RENAL INSUFFICIENCY means a sudden cessation of renal function, usually related to a definable pathologic event. This cessation of renal function leads to the development of azotemia, subsequent uremia and death. Some of the terms frequently associated with this condition are *lower nephron nephrosis, ischemuric nephrosis, crush syndrome, shock kidney and acute tubular necrosis.* One should constantly bear in mind that the lesion in the kidney that develops under those circumstances is usually reversible, and thus that aggressive treatment of the disease process is justified.

Another term that is frequently used in association with this disease process is *oliguria.* This term usually means a urinary output of less than 400 cc. per day. With a urine flow less than this, the individual will progressively become azotemic and uremic. In acute renal insufficiency, however, the urine output usually varies between 50 and 150 cc. per day.

Uremia represents a symptom complex associated with biochemical changes in the blood. The changes in serum concentrations of various elements can be associated with the development of various symptoms.

Dialysis means the passage of substances across a semi-permeable membrane. The rapidity with which the passage takes place depends on the size of the particle, the concentration and the gradient that is established between the blood and the fluids on the other side of the semi-permeable membrane. Generally speaking, ionic substances in high concentrations that are within the blood will tend to pass into the fluid surrounding the cellophane membrane if there is a low concentration in that fluid.

The incidence of acute renal insufficiency is hard to evaluate. It is felt that the numbers of cases are gradually increasing. This increase may be due to the growing severity of traumatic events that occur to the human body, and also to a specific form of trauma—that which accompanies surgical procedures, which are becoming more numerous and more ambitious. Some cases of acute renal insufficiency are due to incompatible blood transfusions. In going through hospital records, we note that *uremia* is frequently used as a diagnosis, but a closer scrutiny of the records reveals that *uremia* masks what should have been called *acute renal insufficiency. Uremia,* in the past, has been associated with a poor prognosis. If the word continues to have that connotation, there will be a number of cases of acute renal insufficiency that will not be given a chance to survive.

Throughout the past several years, changes have been taking place in the treatment of acute renal insufficiency.[1] When extracorporeal hemodialysis was first introduced, it was used only as a last resort. More recently, it has been used according to some indications that might well be called classic. Those classic indications have been identical with the complications of acute renal failure, including such states as potassium intoxication, uremia, water excess and severe electrolyte imbalance. The scene is again changing, and the concept of prophylactic dialysis[2] is being added to the picture. Prophylactic dialysis is designed to prevent complications, and in some instances dialysis is advised daily after the diagnosis has been made. Other authorities are advising early and frequent dialyses,[3] varying from once every other day to once every third or fourth day. A recent report from the renal unit at Brooke Army Hospital, San Antonio, recorded the use of the artificial kidney on a daily basis. One of the advantages of this regimen is the fact that the patient can be eating a fairly normal diet, with some restriction of the protein and potassium. Whether or not this sort of regimen will have any effect on the renal lesion remains to be seen. However, it does seem reasonable to suppose that by keeping these patients in better caloric and metabolic balance, one can render them less susceptible to the infections that complicate approximately 72 per cent of patients with acute renal failure.

PATHOGENESIS

It is worthwhile to consider what happens in the event of loss of kidney function. Theoretically, the cause of death in these individuals is potassium intoxication. In the 70 Kg. man who has approximately 50 Kg. of body water, the minimum fluid losses should be approximately 1,000 cc. per

The authors, staff members of the surgical service at the Iowa City VA Hospital and of the Department of Surgery at the S.U.I. College of Medicine, made this presentation at the meeting of the Iowa Academy of Surgeons, in Iowa City on October 10, 1959.

day. Such an individual, however, will elaborate approximately 450 cc. of endogenous water. During a 24-hour period, he will metabolize approximately 70 Gm. of protein. The administration of 100 Gm. of glucose per day will diminish the protein breakdown by about one-half. About 6,000 mg. of non-protein nitrogen is contributed to the metabolic pool, accounting for a rise in NPN of between 12 and 20 mg. per day.[4] This breakdown of protein material will contribute about 0.3 mEq. of potassium per liter per day. In a period of 12 days, the serum potassium level will be about 9 mEq./L. The rapidity of the rise of blood urea nitrogen is something of an index of the severity of the renal lesion.[5]

There are a number of unusual cases on record in which a complete removal of renal substance has been accomplished in a human being. Some such patients have lived for long periods of time—as long as 30 days in several instances.[4] Throughout the literature, there probably are four or five recorded cases of patients who have lived between three and four weeks following either ligature of the ureters or removal of an only remaining functioning kidney.

The drama of acute renal insufficiency takes place in the cortex of the kidney almost exclusively, and in particular in the proximal and distal convoluted tubules. The development of the lesion is closely associated in almost every instance with some degree of cortical ischemia. Because of the anatomic arrangement of the arterial supply to the proximal and distal convoluted tubule, it is easy to conceive that the lesion (if vascular) must perforce be diffuse in both proximal and distal tubule. The lesion is described as tubulorhexic, i.e., destructive of the lining cells and the basement membrane. Lucke[6] described the lesion in the lower nephron in 1946. His viewpoint, however, was purely two-dimensional. In 1951, Oliver[7] described this lesion in its entirety and coined the phrase *ischemuric nephrosis*. Using a three-dimensional method—i.e., a microsurgical technic—he was able to dissect the lesions and note that the pathology was found as frequently in the proximal as in the distal or lower part of the nephron.

Over the past several years, the natural history of acute renal insufficiency (Figure 1) has been well documented. One can divide that history into four essential phases:

1. Initial phase
2. Oliguric phase
3. Diuretic phase
4. Recovery phase.

It is probable that very few patients are seen—or recognized—in the initial phase, and it is prob-

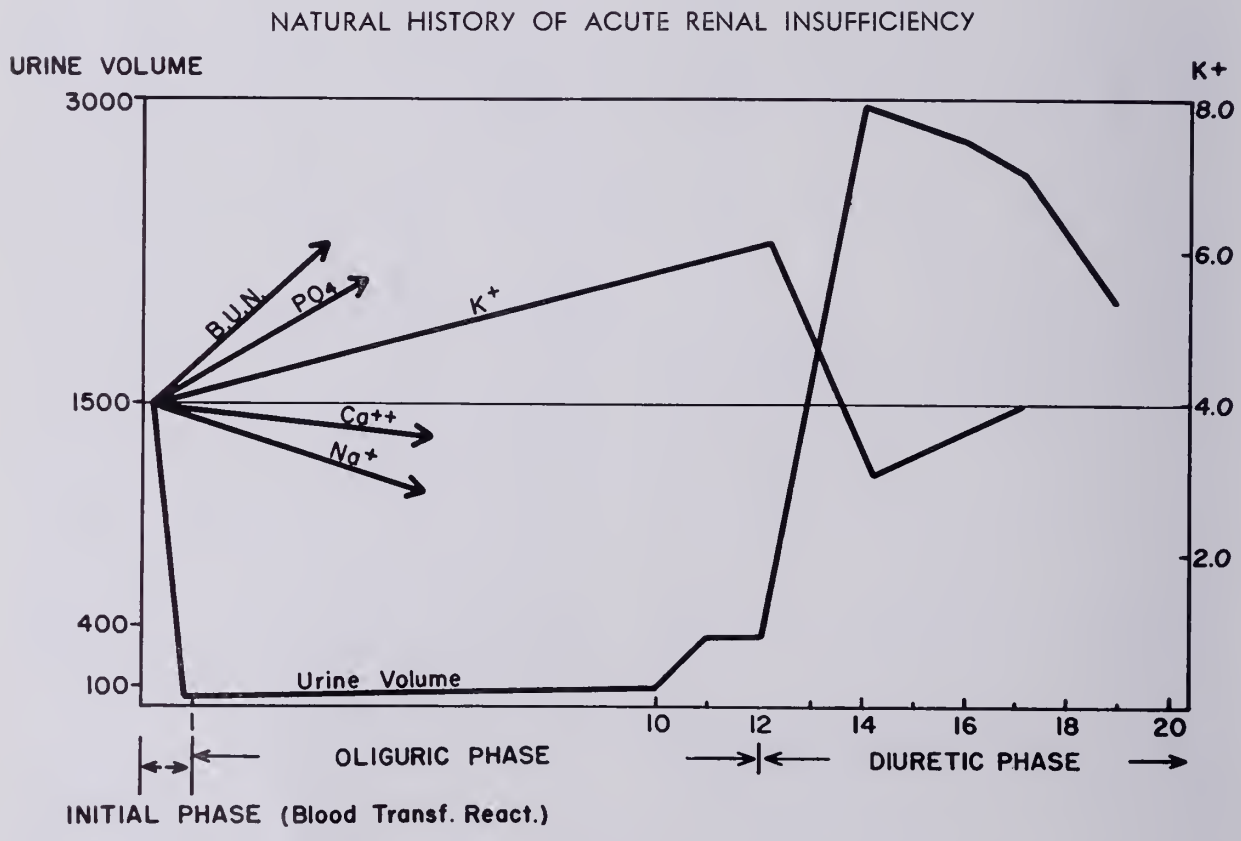


Figure 1

lematical whether anything can be done at the time the renal lesion is being developed. Our attention is focused mostly on the oliguric phase, which may last a variable length of time but usually from five to 12 days. During this time, the urine volume is less than 400 cc. per 24 hours, and usually is between 50 and 150 cc. per day. Signs of uremia can develop on the fourth or fifth day. First, there are usually some gastrointestinal symptoms such as anorexia, nausea and/or vomiting. Potassium intoxication of some degree can be manifest by the seventh to tenth day. If the diuretic phase supervenes, it may last for seven or more days, depending on the quantity of extra fluid administered during the oliguric phase. Recovery may be complete in several months, but some patients sustain a persistent mild kidney damage.

During the oliguric phase, there is a slow rise in blood urea nitrogen, phosphates and potassium. There is usually a decrease in sodium and calcium concentrations. The reason for the decrease in sodium is probably over-hydration. Acid-base balance may be disturbed severely, as is reflected by low CO_2 levels. During the diuretic phase, there can be excessive losses of sodium and potassium.

DIFFERENTIAL DIAGNOSIS

Differential diagnosis may offer a challenge to the clinician. The one entity most frequently confused with acute renal insufficiency is dehydration oliguria. With severe dehydration, the patient may excrete very small quantities of urine—as little as that elaborated by a patient with acute renal insufficiency. In acute renal failure, it is helpful if there is a history of a traumatic episode with associated hypotension, transfusion reaction or other specific agent. The patient with renal failure does not respond to water load, and frequently will not excrete glucose in the urine when hypertonic glucose has been given intravenously. In dehydration oliguria, there is often a history of recent operation with vomiting and ileus. The patient's response to water load is different from that of a patient with acute renal insufficiency. Fairly rapid infusion of 10 per cent glucose and water will lead to an increase in urinary output, as a rule. The use of hypertonic glucose intravenously may result in some degree of glycosuria.

Another condition that is occasionally confused with acute renal insufficiency is chronic renal insufficiency. In a young patient who presents himself to the clinician with anemia, stupor, oliguria and azotemia, the antecedent history may be of great help. Frequently, there is no history of childhood disease that might lead one to suspect chronic renal disease. When in doubt, it is probably best to treat these patients as cases of acute renal insufficiency. In some cases, a renal biopsy is helpful.

THERAPY

The treatment of acute renal insufficiency has evolved in four steps:

1. No specific therapy was administered, but spontaneous vomiting following ingestion of fluid prevented over-hydration. A certain number of people with acute renal insufficiency thus survived with no treatment.

2. A second course of action utilized intravenous fluids to "flush out" the kidney. This sort of treatment, as we know, is associated with a high incidence of pulmonary edema and heart failure.

3. The third could be called the hydroprivic regimen or the conservative treatment, and it was advocated by Strauss[4] in 1948. This treatment is based on a scant replacement of fluids each day—as little as 500 cc. per 24-hour period. It is also directed at the treatment of potassium intoxication, maintaining some degree of caloric balance,[8] and control of the rapidity of the rise of nitrogenous substances in the blood. During this period the artificial kidney was reserved for the treatment of the complications of uremia.

4. The fourth approach that has evolved employs the artificial kidney, and its purpose is to circumvent the development of the complications of acute renal insufficiency. The most advanced version of this latest form of therapy is characterized by the phrase "prophylactic dialysis."[2]

During the treatment of acute renal insufficiency, there are a number of other factors to be considered in addition to those related to fluid, electrolyte and caloric balance. Whether or not an indwelling urethral catheter should be used is debatable. Some maintain that it should be avoided because it may offer a portal of entry for bacteria. If the diagnosis is certain, urethral intubation during the oliguric phase is hardly necessary, for the output doesn't vary a great deal from day to day. When diuresis begins, the clinician usually is promptly aware of the fact.

Because these patients are susceptible to infections, attention should be directed to other organ systems, and especially to the respiratory tract. If the patient has difficulty with tracheobronchial secretions, a tracheotomy should be done promptly.

Gastrointestinal symptoms manifested by anorexia, nausea, vomiting and hiccoughs can be quite troublesome. Some of these symptoms can be controlled through the use of ataraxic drugs. Many of the drugs administered to these patients are not eliminated rapidly by the system, and some drugs are wholly dependent on the kidneys for excretion.

Antibiotics should not necessarily be given prophylactically, but should be administered when indications are present. A word of caution is appropriate regarding the use of streptomycin. This drug is eliminated in the urine, and in oliguric

patients, toxic levels can be attained rapidly.[9] If intravenous fluids must be used, it is probably best to give them intermittently, rather than through an indwelling ube. The patient placed on the classic hydroprivic regimen will probably have trouble in tolerating fluids by mouth after the fourth or fifth day.

Anemia is present, as a rule, in the uremic patient. The hemoglobin levels, more often than not, will fall rapidly to around 8 or 9 Gm. Should the level fall below 8 Gm., it is advisable to use transfusions of packed red cells in an attempt to maintain the hemoglobin level between 8 and 9 Gm. A bleeding tendency may become manifest during the course of uremia. The coagulation defect has not been defined. Usually, prophylactic doses of vitamin K are given daily. Many patients will be hypervolemic when first seen in acute renal insufficiency. The hypervolemia may be an associated heart failure requiring treatment with digitalis. Often a patient needs only a fraction of the usual dose of digitalis, however, for some of the metabolic pathways of digitalis are blocked as a result of the renal failure.

Fluid and electrolyte balance may become a problem during the course of acute renal insufficiency.[9] Ordinarily, not too much attention is given to low sodium or acidosis unless they reach levels that are inimical to the functioning of cells. If the sodium falls below 120 mEq./L., consideration is given to replacement of sodium in the form of lactate. The quantity of sodium given under these circumstances should be as much as will raise the serum sodium to about 130 mEq./L. This will also tend to decrease the severity of the acidosis. One should treat acidosis when it reaches levels below 12 mEq./L.

Much of the therapy in the past has been directed at controlling the potassium level in the blood. There are several fairly effective ways of doing this. Various exchange resins have been utilized and are reasonably efficacious. The potassium levels can be kept within reasonable limits, but there is some difficulty in manipulating the resin itself. Frequently, these individuals cannot take the resin by mouth because of anorexia, nausea or vomiting, and the colonic route must be chosen. One of the problems in the use of the resin is its tendency to form concretions. The use of digitalis makes the cardiac musculature more refractory to the effects of increased potassium concentration. Calcium counteracts the effect of increased serum potassium. Ten grams of calcium, in the form of the gluconate, must be given intramuscularly each day. The use of hypertonic glucose and insulin will tend to decrease the serum potassium level. In the formation of glycogen from glucose, potassium is utilized.

The prevention of protein destruction will decrease the amount of potassium in the serum. Protein degradation is suppressed by the use of hypertonic glucose and by the use of anabolic agents such as testosterone. The most effective way of lowering the serum concentration of potassium is through the use of the artificial kidney. From levels of 8 or 9 mEq./L., one can lower serum potassium to normal in several hours through the use of the extracorporeal hemodialyzer.[10]

THE "ARTIFICIAL KIDNEY" MECHANISM

As we have already said, dialysis is the transfer of substances across a semi-permeable membrane, which in almost all instances is cellophane. The direction of movement across the membrane is conditioned by the concentration of substances within the fluid on either side of the membrane. A net movement of substances is established from an area of high concentration to an area of lower concentration. The rapidity with which dialysis proceeds is dependent upon the size of the particles involved, and also on their concentrations on either side of the membrane.

With present hemodialyzers, dialysis should be accomplished with a negligible mortality attributable directly to dialysis. That patients may die while being dialyzed cannot be denied. However, when they die it is usually because they had to wait too long before dialysis was decided upon.

Figure 2 depicts the flow of substances across a semi-permeable membrane. It will be noted that the membrane is impermeable to red blood cells, white blood cells and the plasma proteins, but is readily permeable to potassium, urea, sodium, chloride and bicarbonate. The diagram of an artificial kidney in Figure 3 shows the direction of flow of fluids, and indicates the essential parts of the device. Blood is usually taken from the radial artery at the wrist and propelled by pump through

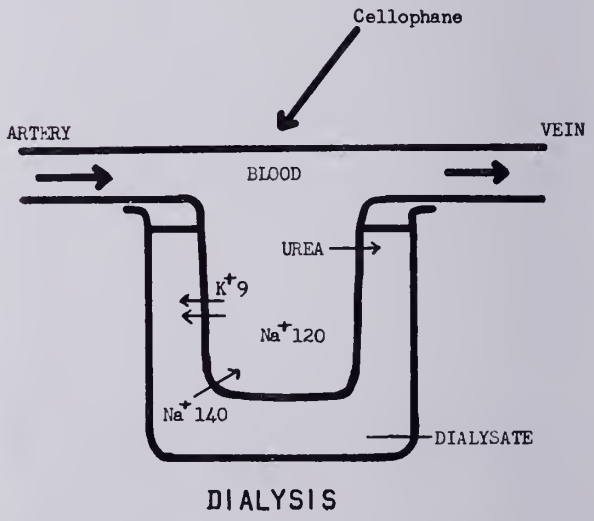


Figure 2. Flow of substances across semi-permeable membrane.

the cellophane tubing in the submerged receptacle. On leaving the cellophane tubing, the blood progresses to a filter, and from there it is returned to the venous system of the patient. The vein selected may be one in the antecubital fossa, the cephalic vein, or the saphenous vein in the thigh. The radial artery is ligated at the termination of the dialysis. In our experience and in the experience of many others, there have been no reported complications from ligations of the radial artery at the wrist following dialysis.

The blood flow through the "kidney" is regulated by the pump. The usual flow is between 150 and 200 cc. of blood per minute. The blood in the system and the patient's blood are heparinized prior to the beginning of dialysis. In some instances, when the patient is actively bleeding at the time of dialysis, is may be desirable to heparinize the machine only. This is accomplished by introducing heparin on the inflow side of the coils and neutralizing it on the outflow side with protamine. In some patients, it is possible to note clinical improvement during the course of dialysis.

SOME STATISTICS

The artificial kidney was used extensively during the Korean conflict. It was felt by many of those working with the device that it was responsible for the survival of some patients with acute renal insufficiency. Because it was used on the most seriously injured patients—ones who had

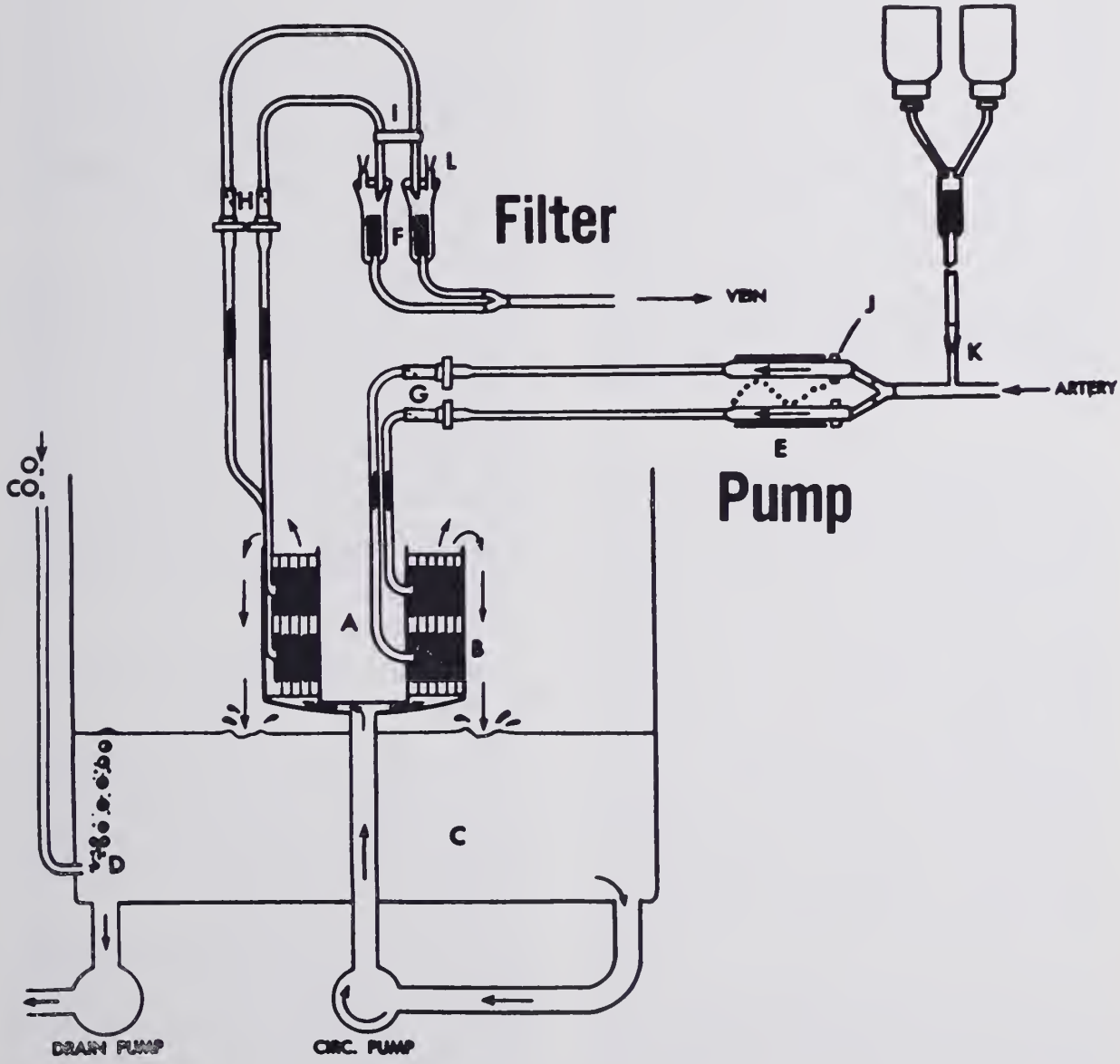


Figure 3. Artificial kidney, showing direction of flow of fluids, and essential parts of the device.

failed to respond to conservative methods—there are no valid controls available for this period. One thing that could be noted was that the patients who were dialyzed and subsequently died lived longer than did those who were not dialyzed and subsequently died. This increased survival of dialyzed patients who subsequently died amounted to an average of several days.[11]

A recent report of the treatment of acute renal insufficiency contains an estimate that approximately 50 per cent of people who acquire this lesion may die.[12] The causes of death are quite varied. In about 72 per cent of deaths, infection plays a major role, and in 20 or 25 per cent it is the direct cause. Another frequent cause of death is cardiopulmonary complications, accounting for about 12 per cent. Respiratory failure accounts for approximately 3 per cent, severe hemorrhage about 5 per cent, hyperkalemia 5 per cent, and central nervous system complications about 2 per cent.

The mortality varies with the cause of acute renal insufficiency. It is noted that the prognosis is better in those who have had transfusion reactions, and in obstetrical complications that lead to acute renal insufficiency. The mortality in this group is approximately 25 per cent. It is also noted that in the nephrotoxic group, those who have poisoning that leads to acute renal insufficiency, the mortality rate is between 30 and 40 per cent. The group with the highest mortality rate (about 70 per cent) is composed of the post-surgical and the post-traumatic patients who have developed acute renal insufficiency.

CONCLUSIONS

The ideal method of handling patients with acute renal insufficiency is referral to a facility where this entity is frequently treated. Familiarity with this disease state leads to more appropriate handling of this critical type of patient. Many of the individuals who have acute renal failure are not seen until late in the disease by those who might have been able to help them. The employment of the conservative treatment during the oliguric phase is well established. One should constantly avoid overloading the patient with fluids. Rapid development of uremia and its complications may indicate prompt treatment, and particularly hemodialysis. The presence of an artificial kidney in a community may engender a false sense of security. Someone must make the unit functional if it is to be of value. At the present time, there is a tendency for earlier and more frequent dialysis in the support of patients with acute renal failure.

In the event that patients need to be transported a considerable distance when they are hyperkalemic and severely uremic, they should be given constant infusions of hypertonic glucose with insulin. An attempt should be made to correct the acidosis with sodium lactate, and possibly digitalis should be administered. In some instances, if they are available, exchange resins should be administered by mouth or by rectum before the patient is transported. Today, there is a greater responsibility on the shoulders of the physician to make an earlier diagnosis of acute renal damage and to assure early treatment.

The natural history, pathology and treatment of patients with acute renal insufficiency are fairly well understood. There are a number of complications of this disease process that should be watched for constantly. Treatment, ideally, should be carried out at a center where extracorporeal hemodialysis is available, for hemodialysis is becoming more and more a generally recognized procedure in the treatment of acute renal failure. There is a trend toward early and more frequent dialyses.

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INSERVICE WORKSHOP FOR MEDICAL ASSISTANTS

The Second Annual Inservice Workshop for Medical Assistants will be held at the Center for Continuation Study at S.U.I. September 25-30, 1960. This program is being provided in a sincere attempt to give medical assistants practical information about the general procedures for organizing and performing the business and routine activities of the modern medical office.

The fee of $50 will cover housing at the Center for five nights, Sunday through Thursday nights; breakfasts; the Sunday night get-acquainted dinner at the Amana Colonies; all instructional material; and an attendance certificate. Enrollment will be limited to 50, and registrations will be accepted in order of their receipt.

State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 70-YEAR-OLD EX-BARTENDER was admitted November 18, 1958, with a history of vomiting blood. On one occasion, about a month previously, he had first noticed a small amount of blood in his sputum. Then, on two occasions five and four days before admission, he had suddenly become nauseated and had vomited between a pint and a quart of fluid and clotted blood. With the hematemesis there was a certain amount of weakness, dyspnea and pallor, but the bleeding did not recur and the patient was not hospitalized. There was no history of abdominal pain, weight loss, indigestion, jaundice or a bleeding tendency, and in fact he considered himself to have been in good health prior to the onset of the bleeding.

The hospital record revealed that three years earlier, in 1955, he had had a total prostatectomy for carcinoma without metastases and that he had made a satisfactory recovery. However, about a year and a half before the present illness, in the course of a follow-up, he had complained of anorexia and had been referred to the Medical Out-Clinic. There, the examiner had recorded a heavy intake of alcohol during the preceding 12 years, but no significant symptoms suggestive of digestive or nutritional disorders. Aside from enlargement of the liver, the margin of which was palpable one to three fingerbreadths below the costal margin, there was a paucity of physical findings. Hepatic function tests were interpreted as showing mild cellular dysfunction, and an upper-gastrointestinal series was reported as normal. The patient was advised to abstain from alcohol, and although he was requested to return to the Medical Clinic on subsequent visits, he was not seen again before the onset of his final illness.

On the present admission, the patient appeared to be in no particular distress, and there was no evidence of bleeding. He was mentally clear, responded normally to questions and had no specific complaints. Again, there were few positive physical findings. The liver was palpable two fingerbreadths below the right costal margin, and the spleen was not palpable. There were no spider angiomata.

The stool showed a 4+ reaction to Meyer's reagent. Hemoglobin was 11.0 Gm., and the red blood cell count was 3,800,000 per cu. mm. The white blood cell count was 9,850 per cu. mm., and the differential count was normal. A urinalysis was negative, and no other studies were done on the first day.

During the night, the patient became somewhat disoriented. There was no evidence of bleeding, however, and the next morning he again seemed clear mentally. Two days later he again vomited a large quantity of bright red blood containing many clots, and exhibited signs of shock. A nasogastric tube was introduced, but little blood could be evacuated, and the tube was removed. After transfusion of 1,000 ml. of blood, the patient's condition stabilized, and he was transferred to the Surgical Service.

Later that day, an emergency x-ray revealed esophageal varices, but no evidence of peptic ulcer. A Sengstaken-Blakemore tube was introduced, and balloon tamponade of the esophageal varices was instituted. Additional supportive measures included the following: Neomycin, saline laxatives and Aludrox through the gastric tube; l'arginine and blood transfusions; vitamin K parenterally; and repeated enemas to keep the colon free of changed blood.

Laboratory studies were reported as follows: van den Bergh one minute 0.8, and 30 minute 2.5 mg. per cent; total protein 7.9 Gm. per cent, with albumin 3.5 and globulin 4.4; and cephalin-cholesterol flocculation 3+ at 24 hours and 4+ at 48 hours. No bleeding or clotting tests were recorded at that time.

After the patient's condition had stabilized and improvement was judged to be maximal, surgery was advised but promptly declined. Thereafter, the patient suffered repeated bouts of gastrointestinal hemorrhage and exhibited periodic fluctuations in the level of consciousness. After each attempt at removing the tube, bleeding recurred and reinflation of the balloon was necessary. Finally, 15 days after admission, an operation was undertaken. A portacaval shunt was established.

Postoperatively, the patient appeared to be recovering satisfactorily until the fourth postoperative day. At that time he again vomited fresh and clotted blood, and exhibited signs of shock. Reintroduction of the tube was refused, and bleeding continued in spite of transfusions and other supportive measures. The patient died suddenly after an exsanguinating hemorrhage, five days after surgery and 20 days after his admission to the hospital.

SUMMARY OF CLINICAL DISCUSSION

Dr. John M. Waugh, chief of surgery, Mayo Clinic, Rochester, Minnesota: Some years ago when I was responsible for a good share of the

emergency work at the Mayo Clinic, I don't know of anything that was more frustrating than a patient who was bleeding from what we suspected to be varices. The treatment in those days was pretty much conservative. If we did any operative procedure, it might be a splenectomy, after an interval of a few days. We didn't have the Sengstaken-Blakemore tube at that time, and it was very disturbing when a patient had another bleeding episode and died a week or 10 days later. Splenectomy effects a slight reduction in the blood flow of the portal system, usually estimated at about 20 per cent. Perhaps with a big spleen the reduction could be more than that, but most of the time probably less. At postmortem examination, we sometimes found that the thrombosis had carried from the splenic vein tie-up into the portal vein, and had actually given the patient more difficulty than he had had to start with.

I think that these patients still present problems. In a recent issue of SURGERY, GYNECOLOGY AND OBSTETRICS there is an article on the experience at the Cornell University Center on emergency portacaval shunts and other such bleeding situations.* The staff there have very simple criteria for carrying on their studies, and I would certainly recommend them to you.

As I started out to say, as I got older and the younger men came along, it was with a great deal of relief that I could turn these problems over to someone like Dr. George Hallenbeck, who has been interested in these cases for 10 years now, and we feel has done a magnificent job. He has made a careful study of these patients. We don't have vineyards around Rochester, and thus we don't have the experience with this difficulty that our friends in San Francisco and our friends in Boston and New Haven report. There is no question that wine must be productive of this disorder, and someone has stated that San Francisco has outdone the District of Columbia on the per capita consumption of alcohol, which is quite an achievement.

There are a few things that one would naturally think of in attempting to arrive at a diagnosis of the case that has been put before us. The problem here was probably one of bleeding varices as the result of cirrhosis. One can gather that much from the history, the enlarged liver, the tests and the x-ray studies and interpretation. But I think that there are some other things that we ought to think of in addition. According to the history, a carcinoma of the prostate was encountered some time ago, and although no nodes were involved, we aren't told whether or not an orchiectomy was done at that time, or whether or not stilbestrol was used postoperatively on this patient. We should also like to know whether or not this recent enlargement of the liver appeared to be nodular, and if it did appear so, we should want to know the results of a needle biopsy taken for the purpose of ruling out any spread. However, cancer of the prostate usually doesn't spread to the liver until late. It will tend to metastasize to other places, as you know, and locally to bone. I would regard that possibility as an unlikely one, and I gather that this was a very early cancer of the prostate that was localized and was removed by a total prostatectomy.

One always has to think of the possibility of a duodenal ulcer or a gastric ulcer associated with varices. The combination is altogether possible. I can remember a patient several years ago who continued bleeding after having been treated for varices. That was before we had the diagnostic help of the Sengstaken-Blakemore tube, and after an interval we had to operate. The answer was very simple. The patient was bleeding from a gastric ulcer. Although there were varices present, the bleeding was not coming from the varices.

In the patient under discussion today, we have negative x-rays not only from this visit but also from three or four years before. The x-ray of the stomach had been negative and had been negative also for varices.

We were talking about chronic pancreatitis in our meeting earlier today. This man was a tavern operator, and most of the patients with chronic pancreatitis whom we see in Rochester are tavern operators. Chronic pancreatitis, of course, with cyst formation or even just thrombosis of the splenic vein can produce esophageal varices, and also malignancy in the pancreas can produce esophageal varices. Moreover, we have seen patients bleed from obstruction in this area. It is rare, but something that one must keep in mind. One would have to think also of a malignant lesion in the stomach. However, we have two negative x-rays, and it is certainly unlikely. It isn't often that a malignant lesion in the stomach will bleed and exsanguinate a patient, but occasionally it happens, and I remember a lymphosarcoma in a physician that we had to resect as an emergency because of repeated severe bleeding episodes.

I didn't happen to see whether a prothrombin time was done on this patient. Was a prothrombin time done, and was it within normal range?

Dr. John A. Gius, Surgery: Slightly prolonged.

Dr. Waugh: It is unlikely that prothrombin time might be a factor, but if one doesn't think about it, he is certain to get his fingers burned. One likes to know that there was no splenic enlargement and to have information about other bleeding factors that might have been concerned here. Certainly the diagnosis that would seem the first choice by a wide margin would be bleeding varices secondary to cirrhosis on an alcoholic basis. Also, the blood urea was not given, but there again my

* Wantz, G. E., and Payne, M.: Emergency portacaval shunt. SURG., GYNEC. & OBST., **109**:549-554, (Nov.) 1959.

guess would be that it was within the normal range, until there was bleeding. I am sure that we should like to see the x-rays and hear from the hematologist who may have been concerned in this case.

Dr. C. L. Gillies, Radiology: The esophagus and stomach were examined roentgenographically, and there were esophageal varices, but we were unable to demonstrate any abnormalities of the stomach. The visualized bones showed no evidence of secondary neoplasm from carcinoma of the prostate. A film of the chest was negative except for calcification of the pleura on the right side, which we felt was an incidental finding, presumably the end result of an empyema of many years ago. The only positive findings radiographically were esophageal varices and pleural calcification.

Dr. Gius: The diagnostic possibilities have been given by Dr. Waugh, and we should like to have some comments from Mr. Evans regarding the interpretation of the protocol.

Mr. Titus Evans, Jr., junior medical student: It is the opinion of the junior students on Ward C-31 that the diagnosis that has been given is certainly the first choice. However, we are perplexed by some parts of this case. The protocol says that blood was once found in the sputum. Was this the only occurrence? Since no further mention is made of it, we are inclined to believe that the material was actually bloody vomitus.

We are also concerned somewhat by the history of repeated disorientation of the patient. This story is somewhat suggestive of hepatic coma, related to the absorption of ammonia from the degraded blood in the small intestine. There were two routes by which this ammonia may have reached the brain—first, through the diseased liver, in which the parenchymal cells weren't functioning properly, and second, through the esophageal varices.

The history implies that death was due to an exsanguinating hemorrhage, but the location of this terminal occurrence wasn't stated. It is possible that a prothrombin deficiency or a leaking portacaval shunt may have been involved. A mortality of 7 per cent has been reported in the literature for this operation.

Our diagnoses are: hepatocellular dysfunction, portal hypertension and terminal fatal hemorrhage from esophageal varices.

Dr. Gius: Regarding the question that Mr. Evans has brought to our attention, the only information on the chart regarding blood in the sputum isn't very reliable. I would agree that most likely it was vomited blood. The history of disorientation isn't well documented in the records, and you will recall that this patient was in and out of shock during this entire period. It is difficult to tell from the resident's notes exactly what signs and symptoms the patient exhibited. We do know, however, that periodically, and particularly at night, the disorientation was especially marked. In any event, as the protocol states, the patient was operated upon under less than optimal circumstances, because our hand had been forced. A portacaval shunt was set up.

Dr. George N. Bedell, Internal Medicine: When the patient was seen in the Medical Clinic one and one-half years before his final admission, was a bromsulphalein test done?

Dr. George R. Zimmerman, Pathology: I have the answer to Dr. Bedell's question in my notes. A bromsulphalein test was done in April, 1957, and there was 26 per cent retention at that time.

At autopsy, this man had slightly icteric skin and sclerae. When the abdomen was opened, there were 50 cc. of clear, straw-colored fluid in it. The clarity of the fluid suggested that it was a transudate, rather than an exudate resulting from the surgical procedure. The liver was nodular and hard. It was smaller than normal, weighing 1,345 Gm. Between the nodules of parenchmyal tissue, there was extensive scarring.

Microscopically, the scarred areas contained proliferating bile ductules, and the usual moderate, chronic inflammatory-cell infiltrate. The liver cells in the nodules had a cord-like arrangement and intervening sinusoids, but the sinusoids had no normal relationship to central veins. In other words, the nodules were regenerative ones and were not normal hepatic lobules.

There were large varices in the lower esophagus. Three of the sub-mucosal varices had become ulcerated and perforated. The resulting massive hemorrhage was fatal. The walls of the greatly dilated veins were thickened from intimal sclerosis and muscular hypertrophy—reflections of the long-standing portal hypertension.

The portacaval shunt was patent. There was no thrombosis of either the portal vein or any of its tributaries or of the vena cava. There were no other demonstrable natural portacaval shunts.

The spleen was congested and about twice normal size, but the diffuse fibrosis that is commonly seen with portal hypertension had not developed.

There was patchy pulmonary edema and fresh hemorrhage attributable to shock. Presumably it can be explained on the basic of the increased capillary permeability that is known to occur in shock.

No residuals or metastases from the prostatic adenocarcinoma could be demonstrated.

The renal glomeruli had hyaline thickening of the glomerular capillary walls, a condition that is described in from 25 to 75 per cent of liver-failure cases, and is attributed by many people to liver disease of various types. However, the renal lesions do not correlate well with clinical measurements of liver function.

In and around the pancreas there were foci of fat necrosis. Calcification and a lack of acute

cellulitis in the areas indicated that the process was old and not of present significance.

Other incidental findings included some old pleural adhesions in the right hemithorax, sigmoid diverticulosis without diverticulitis, and considerable generalzed atherosclerosis.

Death was due to massive hemorrhage from esophageal varices resulting from portal hypertension, which in turn was due to advanced cirrhosis of the liver.

ANATOMIC DIAGNOSES

1. Nutritional (Laennec's) cirrhosis, advanced
2. Esophageal varices with rupture and massive hemorrhage
3. Congestion of spleen
4. Portacaval anastomosis, surgical
5. Fat necrosis of pancreas, healing (incidental).

Dr. James A. Clifton, Internal Medicine: Hepatic coma is the climax of a very well described but very poorly understood sequence of events that occurs in some persons who have severe liver disease. I believe that Mr. Evans and his fellow students are correct about the clinical situation in this particular patient. We note that he was confused, especially at night, and that this confusion was somewhat related to his episodes of hemorrhage. Nocturnal confusion is one of the first indications that a patient with severe liver disease is going into hepatic coma. The nurse may report that the patient urinated on the floor, was wandering in the halls or had attempted to read the newspaper upside down. The next morning when the house staff members make their rounds, however, the patient is perfectly normal, and they characteristically do not believe the nurse. This state of affairs may continue for two or three nights, and then on the third or fourth night the patient does not recover spontaneously. The next morning he is confused, somnolent or comatose. Not infrequently, though, hepatic coma comes on suddenly, especially when associated with gastorintestinal hemorrhage or intercurrent infection.

I'm sure you are all aware of the tremendous amount of literature on heaptic coma and its relationship to ammonia intoxication. The whole field is tremendously confused, and the fundamental biochemical abnormalities haven't yet been elicited. I'm sure that ammonia *per se* is not the anwer to this problem.

We note that this patient was given l'arginine in an effort to lower his blood ammonia. There is great controversy regarding the efficacy of glutamic acid and l'arginine in combating hepatic coma. Most workers are beginning to believe that these agents are not particularly beneficial. There have been reports to the contrary, but I think that if you look at these reports critically you will find the same pitfall that we stumble into when we treat many other serious diseases—namely, that we do all of the things that we think may help the patient, and then if the patient improves, we don't know which of the many agents has benefited him.

Dr. Charles Davidson, at the Boston City Hospital, has been deeply interested in this problem for many years, and he has published some excellent studies which show that if l'arginine alone is given in hepatic coma, consistent benefits do not occur even though the blood ammonia level may be reduced. Ammonia is thought to be toxic to the brain, but the exact mechanism that produces this result is unknown. Some believe that the toxicity is due to glutamic acid binding ammonia as glutamine, thus making glutamic acid unavailable for necessary cerebral biochemical functions. It has even been suggested that glutamic acid is a necessary precursor of acetyl-choline, that acetyl-choline is thereby reduced in the brain, and that the ensuing symptoms are results of acetylcholine deficiency. None of these hypotheses have been proved. In 1953, Walsh published his paper in LANCET on the use of glutamic acid in the treatment of hepatic coma, reporting good results in three patients. Like everyone else, we rushed down to the A&P and bought Accent (which is monosodium glutamate). We had the pharmacist sterilize it for intravenous administration, and after treating some 17 patients in hepatic coma, we became convinced that the material was of no benefit.

If a patient goes into hepatic coma because of excess nitrogen in the gut, whether from hemorrhage or from food, the treatment is to remove the nitrogenous material at once. This can be accomplished by enemas, by purges and by forbidding all protein-food intake. Or the hemorrhage can be stopped with the Sengstaken tube or by surgery. Neomycin will decrease the ammonia released by bacterial action in the intestine. Adrenal steroids appear to be of some benefit to some patients, especially those with hepatitis.

I think that in our treatment of patients with hepatic coma, the first thing to do is to pay attention to the early signs, to try to recognize its presence before it has become deeply established, to institute therapy to get rid of nitrogenous material in the gut, and to pay particular attention to serum water and electrolyte concentrations. Meticulous attention to fluid and electrolyte balance, in our hands, has proved the most efficient method for keeping these people alive. The serum potassium level frequently falls, and restoration of serum potassium has been very helpful in maintaining a conscious state.

Dr. Gius: How about the administration of glucose?

Dr. Clifton: Dr. Chester Jones showed many years ago that large amounts of glucose were helpful in treating patients with chronic liver disease. Experimentally, it has been observed that rats with large hepatic glycogen stores withstand carbon tetrachloride poisoning better than do those whose livers are depleted of glycogen. It has been

our policy to give glucose to these patients each day. This we do by using intravenous hypertonic glucose in 10 or 20 per cent solutions, or dripping it down a nasogastric tube, or a combination of both.

Dr. Gius: Now I should like to give a little more background on current ideas about portal hypertension. Frankly, I am quite dubious about the mechanistic approach that we use in explaining the development of esophageal varices. I'll try to point out some of the reasons for my skepticism.

The slide that I am showing you is an x-ray made at operation. It shows the large, thin-walled veins in the submucosa of the esophagus in a patient with a large spleen, normal liver and portal hypertension. This patient also had esophageal varices, but there was no block in the portal vein. In other words, esophageal varices were found. We see patients with esophageal varices who have cirrhosis of the liver as did the patient under consideration, and in whom there is very little enlargement of the spleen. This is different from the usual situation in which hepatosplenomegaly appears to have resulted from portal hypertension.

In the patient whom we are considering, the portal pressure at operation was 330 mm. H_2O. The normal pressure in the portal system does not exceed 200 or 250 mm. H_2O, and thus the patient's pressure can be considered in the hypertensive range. But strange as it may seem, in spite of an apparently adequate shunt, the portal pressure at the completion of the operation was 400 mm. H_2O. There are many things that might possibly cause this discrepancy. The condition of the patient may have been altered because of the effect which controlled respiration may have on the venous pressure in the portal circuit or possibly the output from the heart, etc. There are many things that might cause the pressure to go up in spite of an adequate shunt, but it is still difficult to explain.

But be that as it may, there appears to be a normal flow through the portal vein into the liver, and yet the patient had varices and some backfilling can be seen along the gastric wall. We couldn't demonstrate reflux into the esophageal plexus. We have seen esophageal varices in patients with splenic enlargement, and also in some without any disease demonstrable in the liver or the spleen. There are, therefore, some exceptions to the usual concept that blockage of the portal flow causes portal hypertension, which then produces dilatation of collateral venous channels, the chief ones being the coronary veins to the esophageal plexus and the short gastric veins running from the splenic vein into the esophageal plexus. This is a little hard to accept for the reason that if an obstruction is placed in any part of the venous system, I should expect the total collateral bed to become dilated and possibly varicosed.

The Sengstaken-Blakemore tube is used to control bleeding from ruptured varices. It has three lumina and two balloons (an intragastric balloon and an intra-esophageal balloon). The intragastric balloon is inflated in the stomach, and traction is applied to the tube so that the balloon engages at the esophagogastric junction. The sausage-shaped balloon which now lies within the esophagus is then inflated, and the varices are compressed and the bleeding ceases. The only trouble with this method is that the pressure from the balloon can cause ulceration of the esophagus, and in certain instances it has even produced rupture and death from mediastinitis.

Of the measures used to decompress the portal system, the most popular is portacaval shunt. The portal vein is divided at the hilus of the liver and anastomosed to the inferior vena cava. Another procedure which is used is splenorenal anastomosis. The spleen is removed, the splenic vein is mobilized, and the end of the splenic vein is anastomosed to the side of the left renal vein. The kidney is not disturbed.

TABLE 1

PROCEDURES UTILIZED IN CONTROLLING BLEEDING FROM ESOPHAGEAL VARICES

Balloon tamponade (Sengstaken-Blakemore tube or one of its modifications)
Injection of varices with sclerosing solutions
Ligation of varices, transesophageal
Interruption of arterial supply to liver or spleen
Transection of the cardiac end of stomach
Resection of gastro-esophageal area, with reanastomosis
Excision of the spleen
Veno-venous anastomoses
a. splenorenal shunt
b. portacaval shunt

Table 1 lists the various methods for controlling bleeding from esophageal varices. The very fact that there are so many methods suggests that none is perfect and that there is no complete answer to the problem. We have already spoken of tamponade. Injection of varices was popular a number of years ago, but has been pretty well given up. Ligation of varices is used occasionally. Transection entails dividing the stomach and the coronary veins and the short gastric veins. It may reduce the tendency to bleeding for a time. Resection of the gastro-esophageal junction is not a good operation. As mentioned by Dr. Waugh, splenectomy may effect a temporary lowering in the portal tension.

Our experience has not been large in the treatment of bleeding esophageal varices with portal hypertension. Dr. Moss and I have reported 20 cases recently.* In that group, the mortality was

* Gius, J. A., and Moss, H. B.: Portacaval shunt for bleeding esophageal varices. J. IOWA M. SOC., 50:133-139, (Mar.) 1960.

15 per cent, and that rate is comparable with those at other large centers.

Dr. Waugh: In the article in S. G. & O. to which I referred earlier, Wantz and Payne report finding that in patients who required an emergency procedure the mortality was about 64 per cent when there was severe liver damage and an end-to-side anastomosis was used. On the other hand, if they were able to rehabilitate patients, possibly reducing the extent of liver damage, and make them candidates for elective surgery, they were able to come out with a mortality of around 9 per cent. When one realizes that under these circumstances the mortality is pretty close to 100 per cent with conservative management, he certainly would want to take his chances with some type of portacaval shunt.

Dr. Gius went over the mortalities of these procedures such as transesophageal ligation of the veins. I should like to have his opinion on whether he occasionally has to do both procedures—i.e., a transesophageal ligation and a portacaval or splenorenal shunt—and whether he feels that this patient could have withstood such a procedure. After all, he was an older man with considerable liver damage, and he was near coma.

I think it is well to point out here that a grain and a half of nembutal sometimes will bring 48 hours of sleep to a patient who is on the verge of hepatic coma, and will actually give the physician a measurement of the liver function that is valuable if he is contemplating an elective procedure. Certainly one must go easy on the sedatives in managing these individuals.

Here was a man who got through the original procedure and his bleeding was stopped temporarily. One hesitates to leave a tube in place much longer because of reported rupture, the possibility of erosion and the fact that the man doesn't want a tube anyway. What is your feeling about simultaneous transesophageal ligation under these circumstances? Do you feel that it would have any bearing on this situation? I know you tried to persuade the patient to let you put the tube down again, and I have a feeling that perhaps with the tube in place he might have survived.

Dr. Gius: Well, in this particular instance, Dr. Waugh, I don't really believe it would have made much difference what we did, for the patient's condition was one of progressive decline throughout his hospitalization, and I am certain he couldn't have withstood a combined intrathoracic and intraabdominal procedure.

Dr. Zimmerman says that he forgot to mention that there was no evidence of metastatic cancer from the prostate in this particular patient.

Visiting doctor: I don't think it is necessarily impossible to make a direct, transabdominal attack on the bleeding point, instead of doing a portacaval shunt. Wasn't it Welch, from Albany, who described a very nice approach to the lower end of the esophagus by making an abdominal incision and cutting down through the diaphragm? Incidentally, we call these lesions esophageal varices, but how frequently does one see that most of the bleeding is from gastric varices rather than esophageal ones?

Dr. Gius: Actually, the patient had stopped bleeding when he was operated upon.

It is difficult to control the bleeding by any direct attack, i.e., by ligating the submucosal plexus in the esophagus. There are many diaphragmatic collaterals, and to try to obliterate them from the abdominal side is an impossibility. It's like trying to interrupt varicose veins in the thigh by tying them off at the knee. I think one just can't get them all.

The bleeding may occur from either or both areas. The source of blood is the same, and the flow is outward from the portal system to the submucosal veins of the stomach and esophagus. We do see it from the stomach, but fatal hemorrhages are more often from the esophageal plexus. Welch's writings on this subject are based on wide experience, and there is merit in what he says, but many of these patients cannot stand a direct transthoracic attack during the time they are bleeding. When we have ligated or "reefed" esophageal varices, the patients have died from pulmonary complications and other difficulties. At this time, we favor emergency portacaval shunt over ligation of the esophageal varices.

Incidentally, there is one more thing on which I should like Dr. Waugh to comment. Dr. Wangensteen's group in Minneapolis has used local hypothermia for the control of bleeding. A cooling mixture of alcohol and water circulated through a tube lying in the esophagus and stomach is said to be effective in the control of bleeding from gastric ulcers and esophageal varices.

Dr. Waugh: I have had no experience with cooling. With a bleeding duodenal ulcer or a bleeding gastric ulcer, I should prefer to have the surgeon tie off the vessels, and do a gastric resection or at least take care of the vessels in that crater directly, rather than rely on an indirect method. I doubt that hypothermia would have any theoretical justification in the treatment of esophageal varices, although Baronofski, after some original work done about 15 years ago when he was a resident with Dr. Wangensteen, thought that these might be due to peptic erosions. You'll remember it was suggested that vagotomy might be done for these patients, among other things. But I don't think that these actually are peptic erosions. Certainly they are present, and I think Dr. Zimmerman will tell us that very frequently they are found postmortem in patients who have bled, but I doubt that as a general rule the erosions that are found are causative factors in the bleeding. Personally, I feel that if I had a bleeding lesion I would cer-

tainly want the direct approach made, and it is true that if a patient is in good shape, we'd all want to take care of the varix first, before undertaking any other procedure.

These are desperate situations, and one is reluctant to gamble. The thing to do is to relieve the portal hypertension as quickly as possible, by the means that is most likely to correct it. One can assume that the patient usually will not be afraid of the tube as this patient was.

At the present time, I feel that cooling is certainly a good experimental tool, but I wouldn't want to use it with my patients until we know more about its capabilities. Wangensteen is using it for bleeding duodenal ulcer or gastric ulcer.

Dr. Gius: Have you had any experience with Pitressin?

Dr. Waugh: I have had no experience with it, but perhaps someone else will comment on that material.

There is something else that I should like to hear discussed. Why do you prefer an end-to-side portacaval shunt, rather than a side-to-side? In a patient with ascites, do you carry out an end-to-side?

Dr. Gius: I prefer an end-to-side anastomosis because it has worked best for me. It is easier to do, and I have more confidence that it will remain functional.

Regarding Pitressin, which is one of several drugs that are reported to produce decreased tension in the portal system, I'm unable to explain the physiology and the pharmacology of the response, but there may be a place for these agents in the conservative management of patients who are bleeding as a result of portal hypertension.

Coming Meetings

Out of State

July 1-2	**Regional Postgraduate Institute (Sacramento Valley Counties in cooperation with UCLA School of Medicine.)** Tahoe Tavern, Lake Tahoe
July 4-15	**International Course in Reconstructive Nasal Surgery (American Rhinologic Society).** Mexico City
July 5-8	**Ophthalmology (University of Colorado Medical Center).** Aspen, Colorado
July 5-9	**Fourth International Goiter Conference (London Thyroid Club, American Goiter Association and the Royal College of Surgeons).** London, England
July 6-8	**American Goiter Association.** Church House, London, England
July 7-8	**Second Annual Oregon Cancer Conference.** Sheraton Hotel, Portland
July 10-14	**Pan American Tuberculosis Congress.** Bahia, Brazil
July 11	**Flying Physicians Association Hawaii Cruise.** Leaving Los Angeles and San Francisco
July 11-13	**Obstetrics and Gynecology.** University of Colorado Medical Center, Denver
July 11-16	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Sheraton-Towers Hotel, Chicago
July 11-22	**General Practice Review.** Cook County Graduate School of Medicine, Chicago
July 13-15	**Postgraduate Conference in Strabismus.** Stanford University School of Medicine, San Francisco
July 14-16	**Dermatology for General Practitioners.** University of Colorado Medical Center, Denver
July 14-16	**Symposium on Staphylococcal Infections (Faculty of Medical Sciences of Buenos Aires).** Buenos Aires, Argentina
July 17-20	**General Pediatrics.** University of California Residential Conference Center, Lake Arrowhead
July 18-22	**Fifth International Medical Conference on Congenital Malformations (The National Foundation).** London, England.
July 18-23	**International Congress of Endocrinology.** Copenhagen, Denmark
July 20-21	**Rocky Mountain Cancer Conference.** Denver-Hilton Hotel, Denver
July 20-24	**Advanced Seminars in Internal Medicine.** University of California Residential Conference Center, Lake Arrowhead
July 21-23	**Dermatology for General Practitioners.** University of Colorado Medical Center, Denver
July 22	**American Society of Facial Plastic Surgery.** Hotel Elysee, New York City
July 24-29	**International Conference on Scientific Study of Mental Deficiency.** London
July 25-26	**Dermatologic Therapy.** University of California at Los Angeles
July 25-29	**Thirteenth International Congress on Occupational Health.** Waldorf-Astoria, New York City
July 26-28	**Fifth International Poliomyelitis Conference (National Foundation and Danish Foundation for Infantile Paralysis).** Copenhagen, Denmark
July 27-31	**Advanced Seminars in Dermatology.** University of California Residential Conference Center, Lake Arrowhead
July 31-Aug. 5	**International Congress Against Alcoholism.** Stockholm, Sweden
Aug. 3-5	**Anesthesia for Special Procedures.** University of California at Los Angeles
Aug. 3-5	**St. Joseph's Hospital Annual Clinics.** St. Joseph's Hospital, Denver
Aug. 4-7	**Northwest Regional Meeting of the Academics of General Practice.** Seattle
Aug. 4-20	**Third Postgraduate Refresher Course (University of California School of Medicine).** Honolulu, aboard the *S.S. Lurline*
Aug. 7-12	**International Congress of Gerontology.** Mark Hopkins Hotel, San Francisco
Aug. 7-14	**Fifth International Congress of Gerontology.** San Francisco
Aug. 8-11	**National Medical Association, Inc.** Penn-Sheraton Hotel, Pittsburgh
Aug. 8-19	**Reconstructive Surgery of the Nasal Septum and External Pyramid (Department of Otorhinology of Mayer de Rothschild Hadassah University Hospital and the Hebrew University-Hadassah Medical School of Jerusalem).** Jerusalem

(Continued on page 384)



RUPTURE OF THE SPLEEN

With the increased numbers of highway accidents at the present time, the incidence of traumatic rupture of the spleen appears to be mounting. It is generally accepted that the occurrence of splenic wounding in blunt abdominal trauma amounts to almost 50 per cent, exclusive of splenic injuries during elective procedures such as hiatus hernia repair.

Recently, Donhauser and Locke* reported on 68 patients seen at the Albany, New York, Hospital during a period extending from 1935 to 1958. Automobile accidents had been responsible for splenic rupture in 56 per cent of these patients. Falls were the next most common cause. Parenthetically, it is worth mentioning that we still see patients with rupture of the spleen as a result of falling from horses. Male patients, in the Donhauser-Locke series, were predominant in a ratio of 3:1.

Signs and symptoms are quite varied. With internal hemorrhage and peritoneal irritation, pain referred to the left shoulder (Kehr's sign), a guarding of the left upper abdominal quadrant and tenderness in that region should warn of the likelihood of splenic rupture. X-ray examination of the abdomen, non-shifting dullness in the left upper quadrant and an increased white blood cell count may indicate internal hemorrhage. It must be remembered that delayed hemorrhage may occur without warning after 48 hours, or even days or months later.

Clinical manifestations of intra-abdominal injury often appear slowly, and are frequently obscured by excitement, prostration and shock. There is probably no other abdominal complication following an automobile accident about which prompt consultation with a neurosurgeon, an orthopedic surgeon, a thoracic surgeon and a urologist is more imperative. Once the diagnosis is made, surgical treatment through an adequate incision, exploration of other organs besides the spleen itself, finger control of bleeding from the splenic hilum until other organs have been identified with certainty, and complete splenectomy should be accomplished. Postoperative management is relatively uncomplicated. With vigilant and aggressive action, most patients with splenic rupture can be saved.

* Donhauser, J. L., and Locke, D. J.: Traumatic rupture of spleen. AMA ARCH. SURG., 90:153-158, (June) 1960.

SIMPLE TEST FOR DISSEMINATED LUPUS ERYTHEMATOSUS

A simple diagnostic test making it possible to screen large numbers of patients accurately and quickly for disseminated lupus erythematosus has been reported in the April issue of the PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE by John Bozicevich and Drs. John P. Nasou and Donald E. Kayhoe, all of the National Institutes of Health.

Once considered a rare disease, lupus erythematosus is now known to be far commoner than past statistics would indicate. One difficulty has been the frequency with which it is confused diagnostically with a variety of other ailments. Its manifestations may include blood, kidney or nerve disorders, and even mental disease, as well as the more common findings of arthritis and "butterfly" rash of the face. Complicating the diagnosis, these may occur either simultaneously or one at a time. The disease can persist for many years without serious complications, but in its acute form it is frequently fatal.

The diagnostic procedure is similar to that originally devised for the identification of rheumatoid arthritis. Like that other method, it employs bentonite, a type of colloidal clay, as its key element. In this case, however, desoxyribonucleic acid (DNA), rather than gamma globulin, is used to coat and sensitize the clay particles. Then, when a drop of the patient's serum is added to the mixture, a flocculation occurs in a few moments if the disease is present.

The authors of the report indicate that one of the disadvantages in the test previously employed for the detection of the lupus erythematosus cell was the necessity for fresh whole blood to effect a reaction. In the newly developed test, only the patient's serum is required, and thus investigators can collect, preserve and transport samples when the subjects are a considerable distance from the testing laboratory.

Eight lupus patients were tested, and complete agreement was found between the new procedure and the lupus-cell test previously used in diagnosing this disease. For controls, 138 sera samples from normal individuals or from patients with related and unrelated diseases were appraised. All proved negative.

Summarizing the advantages of the new procedure, the investigators listed simplicity, rapidity and specificity. As for the last of these characteristics, the following example is significant. Six individuals with frank rheumatoid arthritis were selected—ones with positive reactions for lupus when tested by the old method. All were found negative by the flocculation test.

HYPNOSIS HAS SIGNIFICANT DISADVANTAGES

Hypnosis does not completely abolish the perception of pain, according to Dr. Eugene A. Kaplan, a Syracuse psychiatrist. Writing in the May issue of AMA ARCHIVES OF GENERAL PSYCHIATRY, he has reported that during hypnosis pain "is not relieved in the sense of being minimized or abolished, but rather, is denied or repressed via an artificially induced dissociative state."

He relates that a 20-year-old college student, during a course of four hypnotic interviews, developed the ability of automatic writing, i.e., his right hand was able to write "anything it wanted to, not subject to the control or restrictions of the 'conscious' personality." In the experiment, he was told in advance that his arm would be pricked several times and that he was to say whether he felt anything. It was then suggested to him by hypnosis that his left arm would be insensible to pain. The left arm was pricked, and he indicated no feeling, even asking the experimentor, "When are you going to begin?" However, from the moment the pricking began, his right arm had begun to write: "Ouch, damn it, you're hurting me!"

Dr. Kaplan indulges in a bit of philosophical comment about this finding: "Since the human being is still experiencing discomfort which could have been relieved (in the sense of removing or preventing it at a neurophysiological level) by chemical anesthetics and analgesics, it would seem appropriate to use these types of agents when possible, rather than hypnosis, in relieving pain of this kind. This conclusion is based on the assumption that it is the physician's task to relieve suffering rather than displace it."

Though it may seem that Dr. Kaplan is being highly academic in his speculations, there is a possibility that a pain that is denied its effect through the interposition of hypnosis may find expression afterward, at least in certain individuals. In a report published in the May 28 issue of JAMA, Dr. Monte J. Meldman, of Des Plaines, Illinois, tells of a 41-year-old man whom a hypnotist had "cured" of his fear of flying. However, on the day following his first subsequent flight, he developed strong feelings of despondency. He lost his appetite and became jittery, eventually remaining in bed, trembling and afraid to move.

During the man's subsequent hospitalization, Dr. Meldman said he found by taking a medical history that he had not been a proper subject for hypnotic therapy. Obviously, his airplane phobia was related to some more central issue.

PROMISING NEW APPROACH TO HYPERTENSION

USPHS scientists reported on May 2 that a new family of compounds, the decarboxylase inhibitors, are providing a promising new approach to the understanding of hypertension, and may eventually offer a new means of treating this disquieting disorder. The most effective of these compounds, alpha-methyl dopa, has lowered blood pressure in all of a series of 10 hypertensive patients on whom it was tried.

The findings, presented at the Atlantic City meeting of the American Society for Clinical Investigation by Dr. J. A. Oates, indicate that the drug holds great promise as a research tool, not only in hypertension but also in other diseases characterized by excessive levels of certain aromatic amines. Alpha-methyl dopa and related compounds inhibit the enzyme decarboxylase, whose action is essential to the production by the body of norepinephrine, epinephrine, serotonin and other amines suspected of playing an important role in hypertension. Besides lowering blood pressure, alpha-methyl dopa exerts a tranquilizing and sedative effect, but this appears to diminish with continued treatment.

The clinical trials described by Dr. Oates are the culmination of extensive laboratory testing by Merck Sharp & Dohme scientists in this country, and by other workers here, in Canada and in Europe.

SCIENTIFIC-EXHIBIT SPACE AT WASHINGTON AMA MEETING

Application forms for space in the scientific exhibit area at the Washington, D. C., Clinical Meeting of the AMA, November 28 to December 1, are now available and may be procured from Charles H. Bramlitt, M.D., director, Department of Scientific Assembly, AMA, 535 North Dearborn Street, Chicago 10. Applications close on August 1.

The Hull Award will be presented for the first time at this meeting to the best exhibit on a scientific subject that has not been previously shown at a medical meeting. It will consist of a gold medal and $250.

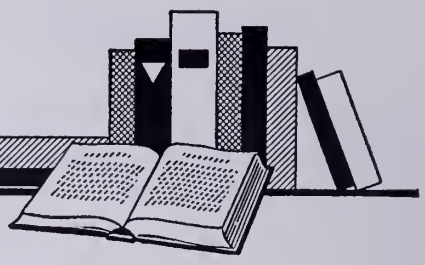
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THE JOURNAL *Book Shelf*



BOOKS RECEIVED

THE LIST METHOD OF PSYCHOTHERAPY, with an introduction by *Jacob S. List.* (New York, The Philosophical Library, Inc., 1960. $7.50).

THE OFFICE ASSISTANT IN MEDICAL PRACTICE, SECOND EDITION, by *Portia M. Frederick* and *Carol Towner.* (Philadelphia, W. B. Saunders Company, 1960. $5.25).

PARDON MY SNEEZE, by *Milton Millman,* M.D. (San Diego, Frye & Smith, Ltd., 1960. $4.00).

THORACIC SURGERY BEFORE THE 20TH CENTURY, by *Lew A. Hochberg,* M.D. (New York, The Vantage Press, 1960. $15.00).

EDEMA, MECHANISMS AND MANAGEMENT: A HAHNEMANN SYMPOSIUM ON SALT AND WATER RETENTION, ed. by *John H. Moyer,* M.D., and *Morton Fuchs,* M.D. (Philadelphia, W. B. Saunders Company, 1960. $15.00).

MEDICAL, SURGICAL AND GYNECOLOGICAL COMPLICATIONS OF PREGNANCY, ed. by *Alan F. Guttmacher,* M.D., and *Joseph J. Rovinsky,* M.D. (Baltimore, The Williams & Wilkins Company, 1960. $16.50).

THE THYROID-VITAMIN APPROACH TO CHOLESTEROL ATHEROMATOSIS AND CHRONIC DISEASE. A TEN-YEAR STUDY, by *Murray Israel,* M.D. (New York, Vascular Research Foundation, 1960. $).

FUNDAMENTALS OF CLINICAL HEMATOLOGY by *Byrd S. Leavell, M.D.,* and *Oscar A. Thorup, Jr.,* M.D. (Philadelphia, 1960. $10.00).

BOOK REVIEWS

MEDICAL CARE OF THE ADOLESCENT, by *Roswell J. Gallagher,* M.D. (New York, Appleton-Century-Crofts, Inc., 1960. $10.00).

This is a book that will serve a very important purpose on the desks of physicians who are concerned with understanding and providing medical care to young people. Dr. Gallagher can speak with authority on these matters, for he is chief of the Adolescent Unit at the Boston Children's Hospital Medical Center.

Growth and development, and their implications, are considered initially. Then, the succeeding chapters are concerned with specific situations—obesity, fatigue and fitness, cardiac disease, endocrine problems, epilepsy, orthopedic disorders, emotional difficulties and many others. The presentation is not too bulky, the reference data are good, and the scope of coverage is unavailable elsewhere in a single volume.

This is truly a timely and much-needed book.—*M. E. Alberts,* M.D.

ELEMENTARY STATISTICS, WITH APPLICATIONS IN MEDICINE AND THE BIOLOGICAL SCIENCES, by *Frederick E. Croxton,* Ph.D. (New York, Dover Publications, Inc., 1953. $1.95).

The book represents a clear and detailed summary of statistical processing methods, and doesn't assume that the reader has any knowledge of mathematics. There are no "proofs" to scare him, and the use of actual evaluated examples eases the reading.

The use of symbols is quite extensive, but one gets acquainted with them, and the meaning of every symbol is given before each chapter.

The book would be of great value to those who need statistics and find themselves with only a limited amount of knowledge in this field.—*Loren E. Chancellor,* Director, Division of Vital Statistics, Iowa State Department of Health.

COMMUNICABLE AND INFECTIOUS DISEASES, FOURTH EDITION, by *F. H. Top,* M.D. (St. Louis, The C. V. Mosby Company, 1960. $20.00).

The fourth edition of this familiar work on communicable diseases represents an up-dating of discussions on many such ailments. Much of the revision has centered around the virus diseases, as well as such bacterial diseases as staphylococcal infections. Other sections have been revised or rewritten to bring them into line with present concepts, as well as to make them more precise.

This book remains a valuable reference for all professional persons responsible for the diagnosis, prevention and treatment of infectious diseases. We Iowa physicians should be truly proud to have the author of this book as our colleague. Dr. Top, our congratulations to you for this excellent work!—*M. E. Alberts,* M.D.

FIRST AID: DIAGNOSIS AND MANAGEMENT, FIFTH EDITION, by *Warren H. Cole,* M.D., and *Charles B. Puestow,* M.D. (New York, Appleton-Century-Crofts, Inc., 1960. $6.25).

In this fifth edition of a highly valuable guide to the rendering of first aid, the presentations have been brought up to date, to keep them abreast of the advances in medical science and of developments in industry, construction and the other sorts of activity in which mishaps can occur and the need for first aid is inevitable. Dr. Cole very wisely introduces the subject with a concise chapter entitled "Precautions and Limitations in First Aid Work." From there, he

and his collaborators proceed through all of the aspects of basic first aid and then into specific areas, either anatomical divisions or organ systems. Consideration is given to some military situations as well, for there are discussions of missiles, rockets, nuclear bombs and biochemical warfare.

This book should be valuable to the medical personnel in hospital emergency rooms and in industrial plants, to students in the MEND program, to Civil Defense medical personnel, and to rescue squad members. Physicians can gain much from the book, and not the least of the benefits they can derive from it will be the realization that in disaster situations they must spend many of the first hours in rendering first aid, rather than in undertaking definitive treatment.

The manner of presentation is logical, the format is easy to follow, and the illustrations add to the value of the book.—*M. E. Alberts,* M.D.

SURGERY IN WORLD WAR II: NEUROSURGERY, VOL. II, ed. by *R. Glen Spurling,* M.D., and *Barnes Woodhall,* M.D. (Washington, D. C., Medical Department, United States Army, 1959. $7.00).

This is the second and concluding volume in the U. S. Army's neurosurgical series, this one dealing with injuries and diseases of the spine and injuries of peripheral nerves. In his foreword, Major General S. B. Hays, of the surgeon general's office, mentions the brilliant chapter provided by the paraplegic program in World War II, as compared to the dismal failure of a similar program in World War I; the story of the herniated nucleus pulposus, with the changing policy of the Army toward this condition that was necessitated by the duty demands of military service; and the heavy neurosurgical load furnished by peripheral nerve injuries. Dr. Hays very properly points out that the Peripheral Nerve Registry, described in detail in this volume ". . . is probably the most satisfactory follow-up of wartime injuries that has ever been accomplished."

The volume itself is divided into two parts: Part I, Injuries of the Spinal Cord (and including management of the ruptured intervertebral disc); and Part II, Peripheral Nerve Injuries. There are 283 black and white illustrations, 12 color plates and 15 tables. Six appendices (essentially analyses and directives) conclude the book.

This is a handsome text, a "must have" volume for the orthopedist, the neurosurgeon and others having to do with the care of patients who have spinal-cord or peripheral-nerve injuries. We owe a deep debt of gratitude to the Medical Department of the United States Army for making this vital information available to us.—*John T. Bakody,* M.D.

PAIN AND ITCH, NERVOUS MECHANISMS: CIBA FOUNDATION STUDY GROUP NO. 1, ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., M.B., M.R.C.P., and *Maeve O'Connor,* B.A. (Boston, Little, Brown and Company, 1959. $2.50).

The nature of pain, and especially its material basis, constituted the topics for discussions by 20 physiologists and clinicians on March 10, 1959. Since the evidence suggested a common signalling mechanism, the inquiry was extended to include itch. This small volume reports the results of that conference.

In human hairy skin (which covers more than 90 per cent of the body surface), the majority of nerve endings terminate as "free" nerve endings and as hair follicle endings. In non-hairy skin (such as that on the palms and the soles), there are free nerve endings and Meissner corpuscles. Warmth, cold, pain and itch are served by free nerve endings. Experiments were cited to support the spectulation that the before-mentioned modalities of sensation depend upon a central analysis of a space-time pattern of activity evoked from the nerve terminals. The scratching to relieve itch may produce its relief by mechanical damage to the superficial nerve endings.

It has been known since 1924 that the rate of nerve conduction varies with the diameter of the nerve fiber. It gradually became apparent that pain is conducted by unmyelinated "C" fibers. More recent electronic evidence has been adduced in support of this principle.

A study of the thalamic and cortical reception of afferent impulses from the tongue is present in the volume, and the results are interpreted as demonstrating that a painful stimulus can prevent touch signals from reaching the cortex. It is thought that the reticular formation "blocks" the specific afferent pathway in such a case, and that this "serves the purpose of selecting the part of the afferent inflow to be presented to the cortex."

Itching is defined as ". . . a readily definable band of the sensory spectrum, inasmuch as it leads to a purposive scratch reflex." Itching (and/or scratching) is as universal as pain, and is observed in diverse species of animals. Itching "arouses the desire to scratch or rub." Endopeptidases, as a class, are pruritogenic when introduced superficially into human skin. These are effective when introduced just below the epidermis. The epidermis may participate, but is not essential. The "itch point" was said to appear as a locus of more unspecialized free nerve endings. Itching is carried over "C" fibers (thin, unmyelinated).

The concluding section of the volume deals with the mechanism of pain in trigeminal neuralgia. Perhaps Lord Adrian best expressed the information here presented when, in his discussion, he stated that "Trigeminal neuralgia is a gloomy subject, although . . . very much the concern of this symposium. It is one of the most intense kinds of pain which can occur, and more information about it might go far toward solving the problems we have discussed."

In his general commentary—a kind of epilogue to the volume—Whittenridge proposed that the words *protopathic* and *epicritic* be placed in "cold storage," and that the terms *hot* and *cold pain* should be shelved.

This small volume does not make easy reading, but it contains much useful neurophysiologic information, and it should be of value to those who are interested in the physiology of pain. It contains 120 pages. I recommend it to those who are interested in the subject.—*John T. Bakody,* M.D.

A DOCTOR REMEMBERS, by *Edward H. Richardson*, M.D. (New York, The Vantage Press, 1960. $3.95).

This is a pleasing and interesting chronicle of memories assembled during a half-century of active practice and part-time teaching of the specialty of gynecology and female urologic surgery, all within the confines of one great medical center—the Johns Hopkins University School of Medicine. It reflects in graphic detail the Big Four at Johns Hopkins—William H. Welch, William Osler, William Stewart Halstead and Howard Atwood Kelly. Although Richardson worked mainly with the latter two surgeons, he draws a memorable picture of his daily contacts with "the most congenial and stimulating group of medical educators in America."

Happy memories are recorded of a boyhood in Old Virginia, of delightful relationships between Negroes and whites. There is an account of a short period of business activity while he was gaining funds for future college study. In 1900, he received a B.A. degree from Hampton Sidney College, and thereafter he applied for entrance to the Hopkins medical school. Because he had insufficient credits in biology, he enrolled as a graduate student in the Departments of Physics and Biology, but he matriculated without difficulty at the medical school in the fall of 1901. He had a generous uncle, and he was thus able to interrupt his medical course between the second and third year for a visit to European centers, including a six-weeks' stay at the old University of Heidelberg.

After receiving his M.D. in 1905, he served as intern at the Hopkins Hospital. During this period he introduced the open-air, drop method of anesthesia, and was commended for so doing by his chief, Dr. Halstead. This led to his working closely with the eminent surgeon in his research work on dogs. At the close of his intern year, Richardson chose to begin a four-year residency under Dr. Kelly that included intensive training in gynecology, female urology, endoscopy and related abdominal surgery. At the end of his period of apprenticeship, he began the private practice of his specialty in Baltimore, but he continued teaching part time at the University.

A chapter in the book is devoted to the opposition that developed when it was suggested that the faculty should be limited to full-time members, in 1914. The issue evidently divided the medical faculty into two opposing groups—the pre-clinical faculty ardently supporting the innovation, and the part-time clinical faculty unitedly opposing it. The discussions participated in by the leading medical educators of the period are interesting in the light of subsequent events.

After more than half a century of professional labors and happy associations, Dr. Richardson retired as an emeritus associate professor of gynecology.

His book also records the rich variety of his experiences in private practice, his thrills of achievement, his satisfactions in teaching younger men, and his feeling that it has been a privilege to live in an era of great medical progress.

A DOCTOR REMEMBERS has correctly been termed a human-interest story of rare excellence.—*Walter L. Bierring*, M.D.

Coming Meetings

(Continued from page 379)

Aug. 8-20	**Medical Genetics.** Bar Harbor, Maine
Aug. 10-12	**Internal Medical Audit.** University of Colorado Medical Center, Denver
Aug. 11-13	**Rocky Mountain Radiological Society.** Denver-Hilton Hotel, Denver
Aug. 13-14	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Muehlebach Hotel, Kansas City, Missouri
Aug. 14-19	**International Congress of Clinical Chemistry.** Edinburgh, Scotland
Aug. 14-20	**Inter-American Congress of Cardiology.** Rio de Janiero, Brazil
Aug. 15	**Cardiopulmonary Disease Seminar.** University of Colorado Medical Center, Denver
Aug. 15-18	**American Veterinary Medical Association.** Denver-Hilton Hotel, Denver
Aug. 15-19	**Western Cardiac Conference.** University of Colorado Medical Center, Denver
Aug. 15-26	**Third International Prosthetics Course (Committee on Prostheses, Braces and Technical Aids of the ISWC).** New York University Postgraduate Medical School, New York
Aug. 17-18	**Arthritis and Rheumatism.** University of California at Los Angeles
Aug. 18-20	**Reno Surgical Society.** Mapes Hotel, Reno
Aug. 20	**Second International Conference, American Institute of Ultrasonics.** Statler-Hilton Hotel, Washington, D. C.
Aug. 21-24	**Latin-American Congress of Angiology.** Rio de Janiero, Brazil
Aug. 21-26	**American Association of Blood Banks.** Jack Tar Hotel, San Francisco
Aug. 21-26	**Third International Congress of Physical Medicine.** Mayflower Hotel, Washington, D. C.
Aug. 22-26	**American Physiological Society.** Stanford University, San Francisco
Aug. 23-26	**Biological Photographic Association, Inc.** Utah Motor Lodge, Salt Lake City
Aug. 24-27	**International Congress of Internal Medicine (Sixth).** Basel, Switzerland
Aug. 25-27	**Conference on the Chemical Organization of Cells: Normal and Abnormal.** University of Wisconsin, Madison
Aug. 25-27	**West Virginia State Medical Association.** The Greenbrier, White Sulphur Springs, West Virginia
Aug. 26-27	**Obstetrical Procedures, Complications and Advances.** University of California at Los Angeles
Aug. 27-Sept. 1	**American Hospital Association.** Civic Auditorium, San Francisco
Aug. 28-Sept. 1	**International Congress for Individual Psychology.** Vienna, Austria
Aug. 28-Sept. 1	**Sixth International Congress on Diseases of the Chest (Council on International Affairs, American College of Chest Physicians).** Vienna, Austria
Aug. 29-Sept. 2	**World Congress of the International Society for the Welfare of Cripples.** New York
Aug. 29-Sept. 3	**European Conference on Electron Microscopy.** Delft, Netherlands
Aug. 31-Sept. 6	**Pediatrics (University of Colorado Medical Center).** Estes Park, Colorado

In the Public Interest



Iowa's New Medical Examiner Law Must Be Made to Work

This past month—half a year before the effective date of the Medical Examiner Act passed by the 1959 General Assembly—a considerable amount of heat was generated in a Board of Supervisors meeting at Des Moines relative to the possible costs of the new system, and the DES MOINES REGISTER, on June 24, headlined the announcement that the Polk County medical examiner can be expected to draw $30,000 next year, or five times as much as the coroner is being paid in 1960.

The $30,000 figure for Iowa's most populous county is very considerably too high, as will be explained below, but there is certain to be an increase in the cost of investigating mysterious deaths in Des Moines and elsewhere, for more of them will be studied, and the investigations will be more thoroughly done than in the past. Along with the other proponents of the Medical Examiner Act, the representatives of the Iowa State Medical Society, who worked at getting legislators to pass it at the specific behest of the Society's House of Delegates, urged its adoption as a means of arriving at the facts and of improving the administration of justice, not as a means of saving money.

MURDERS MUST BE RECOGNIZED IF MURDERERS ARE TO BE CAUGHT

In addition to the thousands of murders that are identified as such but go unsolved each year in the United States, it has been variously estimated that 3,000 to 10,000 non-negligent killings are passed off either as deaths from natural causes or as fatal accidents. One major reason for that state of affairs may well be that, according to a count made in 1958, there were 39 states—and Iowa was one of them—in which the officials primarily responsible for determining the causes of sudden and/or violent deaths were not required to have had any scientific background or training for their jobs.

Of the 58 coroners in California, in 1958, only three were physicians; only three of the 67 in Alabama; and only 11 of the 63 in Colorado. The proportion in Iowa—49 out of 99—was somewhat higher, but it is certainly reasonable to say that it wasn't high enough.

Of course one can't expect much diligence in return for the very low fees that coroners have been paid in Iowa and elsewhere, but such men have, on occasion, neglected even such an elementary investigative step as turning the body over, and thus have failed to discover a knife wound in the victim's back, and some of them have been content to suppose, and officially to report, every unattended death in a man over 40 years of age as a death from "acute heart disease."

Skill in police work would be a good thing for such men to have, but every such investigator should at least be able to determine the direction that a bullet took in passing through a body; tell whether a brain hemorrhage caused a man to fall, or whether his fall caused his brain hemorrhage; and decide whether death preceded or followed the entry of a body into a lake. Layman coroners have always been empowered to call physicians for consultation whenever they felt they needed help, but for a variety of reasons they have only infrequently availed themselves of that privilege.

INSURANCE LIABILITIES ARE FREQUENTLY INVOLVED

The detection of murder is by no means the only reason for the new law requiring every county in Iowa to employ someone with medical training to investigate all questionable deaths. The correct determination of a life insurance company's liability may depend upon the official assessment of the circumstances in which a policyholder died.

It is said that in Minnesota a few years ago, a man known to have been in financial difficulties was found dead, and the coroner ruled his death a suicide on the strength of the fact that a bottle that had contained sleeping tablets stood on a table

nearby. Coroners' verdicts aren't frequently contested, but on that occasion the widow persuaded the county attorney and sheriff to make their own investigation, and with a physician's help they determined that the man had died from accidental carbon monoxide poisoning. In that instance, discovery of the facts not only benefited the dead man's reputation, but meant the difference between impoverishment and a measure of financial security for his widow.

Similarly large amounts of money are at stake in deaths for which surviving relatives may or may not be entitled to workmen's compensation. And there still are possibilities that an investigating official who has no medical knowledge might fail to recognize and report a sudden death from a contagious disease, thus allowing an incipient epidemic to continue undiscovered.

One of the other serious effects of letting lay officials guess at medical diagnoses has been the doubt that this practice has thrown upon the validity of our vital statistics. As long as there are coroners who report deaths in all middle-aged and elderly males as due to "acute heart disease," we shall never know the true mortality from that or from any other cause.

LAW NEEDS INTERPRETATION

There can be no doubt that Iowa will be well rid of the coroner system when the new arrangement takes effect, on January 2, 1961, but the Iowa Medical Examiner Law is susceptible of improvement in a number of respects.

There remains a question about how large a share of deaths require investigation, and there is another about the degrees of thoroughness that need to be employed in the various studies. It has been said perhaps most frequently that about 20 per cent of deaths deserve competent inquiry, and that figure may not be too high. But a strictly literal interpretation of the wording of the law would require the investigation of even more of them than that. Thus, there must be a general agreement on the proper definition of the terms used. For example, the new law says that the medical examiner shall "make inquiries regarding" every death that has occurred to a person who has been "unattended by a physician during the period of 36 hours immediately preceding . . . death." Are we to understand that a patient with an illness which his physician has diagnosed as terminal is to be regarded as a medical examiner's case if he chances to die, let's say, 48 hours after his doctor last saw him? Or is a death to come to the attention of the medical examiner only if the decedent had not been seen by a physician within 36 hours *and was not known to have a probably fatal ailment?* The officers of the Iowa State Medical Society think the latter, though they admit that the law isn't so explicit as it might be.

In this connection, it is interesting that no attempt had previously been made to define the phrase *medical attendance,* in the Iowa statutes, though it had been used in setting forth the responsibilities of coroners. The Division of Vital Statistics of the State Department of Health took it to mean "not visited by a physician within 48 hours of the time of death," on the strength of the fact that "48 hours" appeared most frequently in the laws of other states that had attempted such a definition. Since the framers of the Iowa Medical Examiner Act departed from that figure, saying "36 hours" rather than "48," it is reasonable to suppose they did so deliberately, but their reason remains obscure. In general, perhaps, it is preferable to make such a law "tight," as its authors have done, so as at least to authorize investigations of all cases in which a medical examiner might feel his attention was required. Then, presumably, the question of whether or not to investigate particular cases can be regarded as having been left to the examiner's discretion.

The new law refers to whatever inquiry the medical examiner chooses to make, short of the performance of an autopsy, as a "preliminary investigation," and says that for each such study, including the filing of the required reports, he shall receive a fee of $15. That is the passage which has aroused great concern, and the ISMS officers think it should be given some flexibility either by attorney general's opinion, or if necessary by amendment at the coming session of the General Assembly. Frequently, they think, an investigation may properly involve no more than a conversation between the examiner and the physician who last saw the decedent alive, and a fee of $15 would be somewhat out of line. If any change in the wording of the Act became necessary, perhaps the phraseology should be amended to read ". . . a fee of *no more than* $15." Iowa physicians are anxious to help make the new law work, and to make it work as economically as possible.

Finally, it should be mentioned here that there are some other ways in which the Iowa State Medical Society would like the Medical Examiner Act modified. In each of the other states and several large cities that have such systems, there is a *chief* examiner trained both as a detective and as a physician, and there is a central laboratory for the expert sifting of medical evidence. Perhaps Iowa should be similarly provided.

Few doctors are skilled in crime detection, and though their medical educations have provided them some of the knowledge they need for such activity, they could profit from the advice of men who are thoroughly experienced in the medical aspects of police work. Furthermore, especially in small communities, there will be occasions when they would welcome an opportunity to share responsibility with a prominent outsider in announcing a decision that it seems likely will be locally distasteful.

The Iowa Medical Examiner Law, then, will need some changes, but is nonetheless a long step in the right direction.

President's Page

I want to take this opportunity to bring to the attention of all Iowa doctors the following editorial from THE WALL STREET JOURNAL for May 6, 1960.

E. F. Van Epps

President

CARELESS MEDICAL CARE

In any list of man's essential needs it would be commonplace to put down food, shelter, medical care and clothing. And it is commonplace for any society to accept the obligation to provide all these, where necessary, for the old, the maimed and the helpless.

But in a free society people do not argue that food, shelter and clothing should be provided for everyone, able or not, at the public expense. Only in the case of medical care do a great many people, to whom otherwise socialism would be anathema, seem willing to accept the principles and precepts of the socialized state.

It is this feeling which accounts for the surge of political force behind such measures as the Forand Bill, which would make almost everyone over 65 a medical ward of the state whether he wished to be or not. And it is in response to this pressure that President Eisenhower has put forth his modified proposal, a complicated combination of voluntary medical insurance subsidized by both state and federal aid.

Now this willingness to view medical care as an exception is in itself curious, for it involves closing the mind to all the difficulties and objections which the same people would readily see if anyone proposed having the government feed or clothe everyone over 65.

But perhaps the most curious thing about it is the rapidity with which this idea about government-provided medical care for us "senior citizens" seems to have swept the country, or at least the politicians of the country.

A bare four months ago few people could have told you what the Forand Bill was all about. Indeed, four months ago when the President presented his budget and his State of the Union message neither he nor his political opponents thought of such a program as being urgent or even as a great political issue.

Yet all of a sudden "medicare" is the political thing of the hour. Only the extremeness of the Forand Bill kept it from passing. Even so, having some kind of proposal seems to be a political must for both parties. The Administration's bill was whipped together in a trice, and the desperate Democrats are busily trying to stick together their own lest the Republicans get one-up on this supposedly great issue.

If there were nothing else, this haste ought to run up a warning flag. Setting aside for the moment all debates over philosophy, the practicalities of this kind of bill are immensely complex. The actuarial statistics and the resulting cost figures on any bill hatched in haste must necessarily be largely guesswork. You can put it down as certain that the cost figure of $1.3 billion for the Administration's bill is nowhere near the mark.

But this is only the beginning of the practical complexities. Anything like the Forand Bill would involve a complete re-casting of our whole Social Security System. Anything like the Administration bill would involve a whole series of new statutes by all of the 50 states; in some, possibly, changes in their constitutions.

So for practical reasons alone it would be foolhardy for the Congress to rush through any plan in the hysterical heat engendered by an election year. If this country is going to do any such thing at all, the minimum requirement of good sense and responsibility is that the practical aspects of the actual system proposed be thoroughly explored before any is adopted.

And quite apart from this, what is being proposed here is a fundamental change in the structure of our society. About that, let us not delude ourselves, even though the first step is labeled voluntary and limited, for we are stepping beyond society's obligation to deal generously with specific cases to an assumed obligation to subsidize all of a certain class.

Thus if we begin taxing everyone to subsidize the medical care of all over 65 and with incomes under $2,500, both logic and equity will argue for lower ages and embracing higher income levels. The allowances, too, will soon seem inadequate under the familiar argument that we must not "measure medical care in dollars." And of what avail is medical care, as we shall soon hear, where there is "need" of food and shelter?

So only the blind will fail to see that we will have embarked on a long and uncertain road. And make no mistake about it, many who labor to give this idea its appeal to the people are not blind; they see what lies at the far end of the road and welcome it as a destination.

Perhaps that is a destination the people want, although we cannot believe so. But at least let us not set out upon it with the careless rapture of children charmed by Pied Pipers.



Mental Health

Admission to State Mental Health Institutes and Outpatient Clinics

JAMES O. CROMWELL, M.D.
DIRECTOR OF MENTAL HEALTH
DES MOINES

Four points should be considered by a physician in advising the admission of a patient to one of our state mental institutions:

1. Will the patient enter voluntarily?
2. Is some persuasion necessary?
3. Is the patient obviously mentally ill and unable to cooperate?
4. Is the patient or his family aware of the financial obligation?

VOLUNTARY ADMISSION

Voluntary admission should be advised first. This is not only the simplest procedure, but in most instances the best for the patient, the family and the hospital. The hospital should first be asked, by letter or phone, for appointment or admission clearance. Upon arrival, the patient will be given the opportunity to sign a request for hospitalization and/or treatment. He then will be seen in the outpatient department to determine whether adequate care may be given him on an outpatient basis. If not, he will be admitted. Voluntary patients may demand discharge by giving three days' notice in writing. They must then be discharged or legally committed. With rare exceptions, they are discharged.

TWO-PHYSICIAN CERTIFICATION

Where some persuasion is necessary, the two-physician certification law may be employed. In such instances, two physicians sign a medical statement recommending hospitalization. Here, too, the patient must enter voluntarily as a result of the recommendation. The hospital admits the patient for a 30-day period of evaluation. At the end of that time, if the hospital wishes to recommend a second 30-day period, a report and such a request must be made to the two physicians who made the original recommendation. If they concur, the patient will be detained for a second 30-day period, at the conclusion of which he must be discharged or legally committed. The patient may, however, employ *habeas corpus*. The two-physician certification law is good where a small measure of persuasion will suffice to effect admission.

APPLICATION TO COUNTY HOSPITALIZATION COMMISSION

If the patient is obviously mentally ill and therefore in need of treatment, but is completely unable to cooperate, his hospitalization may be effected by the filing of an application for such hospitalization by any person. The application is made to the county clerk, who is *ex officio* secretary of the hospitalization commission, and he then automatically completes the procedure of hospitalization. But such action must be instigated by the filing of an application for such hospitalization with the county hospitalization commission.

FINANCIAL OBLIGATIONS

Financial obligations are incurred by all patients entering a state mental institution. This fact should be made clear to every patient and/or his family. If able to do so, the patient or his family must pay the entire cost of hospitalization or a part of it. An automatic lien is placed against the property of a patient entering an institution, and this lien must eventually be satisfied unless it is set aside by the county board of supervisors, upon whom rests the responsibility for determining ability to pay. Relatively few patients admitted to a state mental institution are able to reimburse the hospital in full.

Here is some more detailed information regarding admission procedures, summarized from the Code of Iowa, 1958, as amended, for those who desire to have it.

Iowa has two types of institutions:

1. The four Mental Health Institutes at Cherokee, Clarinda, Mt. Pleasant and Independence. These Institutes receive all types of mentally-ill persons, with the exception of the mentally retarded.

2. The Schools at Woodward and Glenwood, and the Hospital for Epileptics at Woodward. Both Schools receive mentally-retarded persons. Woodward also maintains the Hospital for normal epileptics.

THE LEGAL BASES FOR ADMISSION

The four mental health institutes endeavor to admit all mentally ill patients who are properly referred to them for evaluation, treatment and care. Several sections of the Iowa Code provide the legal bases for such admission.

The legal provisions which govern the admission of the majority of the patients entering the four mental health institutes are set forth in the Iowa Code, chapter 229, as amended, which provides for:

1. Voluntary admission
2. Admission to "screening center" for evaluation and recommendation
3. Commitment of cases when such action is recommended after evaluation
4. Admission on two-physician certification, with the consent of the patient, for a period not to exceed 30 days.

VOLUNTARY ADMISSION

About one-third of all patients admitted to the four mental health institutes enter voluntarily. This is the preferred procedure. With the exception of a few cases requiring legal coercion, all cases could use this type of admission.

The voluntary-admission statute (229.41) provides: "Any citizen of the state may make a voluntary personal application for admission to the state hospital for the purpose of securing observation, examination, diagnosis and treatment for mental illness. Such application shall be made in writing on forms prepared under the direction of the Board of Control and shall include an agreement by the applicant that he will abide by the rules and regulations of the hospital and will give three days' notice in writing before demanding his discharge."

The statute further states that no applicant shall be accepted if the hospital lacks adequate facilities or if the admission would result in an overcrowded condition. The statute specifies that a voluntary patient shall, if able, pay the cost of hospitalization. If the patient is unable to pay, an application may be filed with any clerk of district court. After determining the county of the person's legal settlement, the clerk shall authorize his admission as a voluntary case, and the county must pay for such voluntary hospitalization. Payment, whether by the voluntary patient himself or by the county for the voluntary patient, is made direct to the hospital.

INVOLUNTARY ADMISSION—ORDER OF ADMISSION

The first step in instigating the involuntary admission of a patient to a mental health institute is the filing of a "form of information" and "application for admission." Printed forms are available in offices of clerks of district court.

To inaugurate legal action leading to involuntary hospitalization, some person must file the information and application for admission. This person is usually the spouse, or a son or daughter, but may be a friend, an acquaintance or any other person. The form of information and application consists, essentially, of a sworn statement declaring (to quote the Code):

"1. That the person in whose behalf the application is being made is believed to be mentally ill, and a fit subject for custody and treatment in the hospital

"2. That such person has been found in the county

"3. The place of residence of such person or where he is believed to be, or that such residence is not known."

This form of information and application for hospitalization is filed with the county clerk of district court, who is *ex officio* secretary of the hospitalization commission.

Upon receiving the form properly signed and sworn to, the commission of hospitalization, if satisfied that there is reasonable cause therefor, may require the alleged mentally-ill person to be brought before it for a hearing, and to this end, may issue its order to any peace officer of the county. The commission may provide for the custody of such person until its investigation has been concluded.

The commission of hospitalization usually sets a day for the hearing with the least possible delay. It hears witnesses and may subpoena them, requiring that they appear and testify or be held in contempt of court. The hearing is held in the presence of the patient, unless the commission finds that such appearance might be injurious to the patient. The patient is always represented by counsel at the hearing.

The commission must in all cases appoint a regularly practicing physician either from outside or from within its own membership to make a personal examination of the patient so that he may certify to the commission whether the said person is in good mental health or is mentally ill. The statute prescribes the questions that the physician must answer. These questions were propounded many years ago, and cover some of the basic points essential for the formulation of a medical opinion.

After hearing the testimony of the complainant, the witnesses and the physician, the commission renders its decision. It may drop the charges and dismiss the hearing, or it may find that the individual needs hospitalization.

The Code of Iowa says: "If the Commission

finds from the evidence that said person is mentally ill and a fit subject for custody and treatment in the state hospital, it shall order first his observation and treatment at the screening center located at the hospital in the district nearest to the county in which the hearing is conducted." This is called an "order of admission" to distinguish it from a legal commitment, which is called an "order of commitment."

Many patients are admitted to our state mental health institutes on orders of admission, and are examined, treated and discharged without any other legal orders being issued. This proves adequate for short-term cases. However, where a definite and clear diagnosis of psychosis exists—one that will require prolonged hospitalization—the superintendent of the hospital requests the commission to issue an order of commitment. This the commission can do without having to see the patient again. The statute governing this process says: "No order of commitment shall be issued until the superintendent of the hospital at which said screening center is located shall find and recommend that such order be issued, and in the event that such recommendation of commitment is made, the commission shall order his commitment."

To summarize, the usual procedure is:

1. A relative, friend or other person fills out a "form of information" and "application for admission," signs it and swears to it. This form is then filed with the clerk of district court.

2. The hospitalization commission, of which the clerk of court is an *ex officio* member and the secretary, hears the complainant and other witnesses, including a physician who must have examined the patient. The commission then either dismisses the action or issues an order for hospitalization and has the patient taken to the admission and screening center of the state hospital serving the region.

3. At the screening center, the patient is examined, diagnosed, treated and frequently discharged without further legal documentation. However, if the superintendent finds advisable and recommends the issuance of an "order of commitment" the hospitalization commission issues it. Not until this order of commitment has been issued is a person legally *committed* as mentally ill.

CERTIFICATION BY TWO PHYSICIANS

Certification by two physicians, with the patient's consent or approval, is a fourth procedure by which patients may be admitted to a state hospital. The statute outlining this method states (Iowa Code 229.1, paragraph 4): "Provided, however, that application for admission may be made on behalf of a person by his attending physician and another physician experienced in the treatment of mental disease, for a temporary admission for observation, examination, diagnosis and treatment, which admission shall not be for a period of more than 30 days and only after the written consent of said person."

The statute further provides that at the expiration of the 30-day period, the superintendent shall make a certified report of his findings as to the mental condition of said applicant, one copy of which shall be sent to the attending physician filing the application. If the report finds that the person is mentally ill and in need of treatment, a copy shall be sent to the commission of hospitalization in the county in which the applicant is a resident.

If the certification of the patient's condition sent to his attending physician by the hospital superintendent states that a further period of observation and treatment is indicated without the patient's being committed as mentally ill, the attending physician may authorize a further period of such observation and treatment as recommended.

If the patient is not discharged during the second 30-day period of observation and treatment, a recommendation for commitment as mentally ill may be filed by the superintendent with the commission. If, after receiving this recommendation, the commission does not issue an order of commitment within five days, the superintendent may, upon authority of the Board of Control, discharge the patient from the hospital and be absolved of further responsibility.

In cases where some coercion is necessary to effect hospitalization of a patient, this statute has merit. Where a patient is unwilling to apply for admission, the psychological effect of two physicians certifying to his need of such hospitalization often results in compliance on the part of the patient, so that he is willing to sign a request for admission. This procedure may avoid the necessity for legal commitment, with its attendant embarrassment to both family and patient. The preferred method, however, is for the physician to use his powers of persuasion to secure voluntary application for admission without the two-physician certification. Voluntary admission is simple to administer.

ADMISSION PREFERENCE

Section 226.7 of the Iowa Code states the order of preference in the admission of patients to the hospitals:

1. Cases of less duration than one year.

2. Chronic cases, where the disease is of more than one year's duration and presents the most favorable prospect for recovery.

3. Those for whom application has been longest on file, other things being equal.

Where cases are equally meritorious in all other respects, the indigent shall have the preference.

ADMISSION TO INSTITUTIONS FOR EPILEPTICS AND THE MENTALLY RETARDED

Admission of epileptics to the Woodward State Hospital and School is effected in a manner some-

what similar to the admission of patients to the mental health institutes. The Iowa Code (223.7) says: "All laws relating to the commitment of mentally ill persons to the hospitals for the mentally ill, insofar as applicable, shall apply to commitments of epileptics to said hospitals and schools."

The Iowa Code (223.4) states: "All adults afflicted with epilepsy who have been residents of Iowa for at least one year preceding the application for admission, and all children so afflicted whose parents or guardians have been residents of Iowa for a like period, shall be eligible for admission to the Woodward State Hospital and School."

Section 223.13 says: "Voluntary commitments or admissions to the hospitals must be with the approval of the board of supervisors of the county of legal settlement, except those private patients received."

And Section 223.5 says: "The board shall fix and enforce the rate of compensation to be paid in said hospitals by private patients so afflicted."

Mentally retarded or deficient persons are admitted to Glenwood or Woodward voluntarily or involuntarily under procedures that are somewhat similar, but in some ways quite different from those used in admitting mentally ill persons to the mental health institutes.

Voluntary admissions constitute four-fifths of all admissions to Glenwood and Woodward. The Iowa Code (222.54) sets forth the legal basis for this type of admission as follows: "Nothing in this chapter shall be construed to prevent the reception at the institution for the mentally retarded, or at the hospital for epileptics and schools for mentally retarded, of voluntary patients under such rules as the Board of Control may prescribe."

The involuntary or legal commitment of a mentally retarded person is begun by the filing of a petition with the clerk of district or municipal court in the county or city in which such alleged mentally retarded person resides or is found, by a relative or friend of such person, by his legal guardian or by any reputable citizen of the county of such residence or such place of finding.

The Iowa Code (222.4) states: "Such petition shall be verified by affidavit and shall state:

"1. That such person is mentally retarded within the meaning of the Iowa Code.*

"2. That it is dangerous to the welfare of the community for such person to be at large without care or control and the facts tending to show such danger.

"3. The name and residence of all persons, so far as known, supervising, caring for, or supporting such person, or assuming, or under obligation to do so.

"4. The name and residence, if known, of the parents of such person, and of all other persons legally chargeable with the supervision, care, or support of such person.

"5. Whether such person has been examined by a qualified physician with a view to determining his mental condition."

The petitioner must, in the petition, give names of persons who he believes may be able to give testimony in support of his allegations.

After the petition has been filed, a time for a hearing is set. Notice is given to the alleged mentally retarded person, his parents, the person with whom he lives, his guardian and/or the person who is assuming principal responsibility for his care.

Unless the judge orders otherwise, an appearance must be made "not less than five days" after the notice has been served. If the judge considers it necessary, he may order the alleged mentally retarded person taken into protective custody pending the hearing. Unless requested otherwise by the parents or guardian of the person, the trial is public.

The Iowa Code (222.14) states that the judge "shall, at or prior to the final hearing, appoint a commission of two qualified physicians, or of one qualified physician and one qualified psychologist, each of whom shall be a resident of the county, who shall make a personal examination of the alleged mentally retarded person for the purpose of determining his mental condition." The report of findings of the commission is made to the court in writing.

Section 222.17 of the Iowa Code provides that "No commission need be appointed in those cases where the mental retardation of the person is manifest to the court or to the judge.

"Upon the entry of an order of commitment, the clerk shall deliver to any suitable person designated by the county judge, an order of commitment and a duplicate thereof, commanding such person forthwith to deliver the committed person to the institution designated by the court."

ADMISSION OF DRUG ADDICTS

Section 224.1 of the Iowa Code provides that: "Persons addicted to the excessive use of intoxicating liquors, morphine, cocaine, or other narcotic drugs may be committed by the commissioners of hospitalization of each county to such institutions as the Board of Control may designate."

And Section 224.2 says: "All statutes governing the commitment, custody, treatment and maintenance of the mentally ill shall, so far as applicable, govern the commitment, custody, treatment and maintenance of those addicted to the excessive use of such drugs and intoxicating liquors."

Section 226.35 provides for the voluntary admission of an Iowa resident to the mental health

* The Code defines *mentally retarded* as describing any person afflicted with mental retardation from birth or from an early age, so pronounced that he is incapable of controlling himself and his affairs and requires supervision, control and care for his own welfare, or for the welfare of others, or for the welfare of the community, and who is not classifiable as a mentally ill person.

institute for treatment of alcoholism. Application is made directly to the superintendent of the institute. If the superintendent is satisfied, after examination by the staff, that the person is in need of hospital treatment and will be benefited thereby, the applicant may be admitted for such period of time as is deemed necessary for treatment, improvement or recovery of the patient. Costs are paid either by the applicant or the county of legal settlement.

Other types of cases may be admitted to our state mental hospitals under statutory provisions seldom used by physicians. Some of these are:

1. Convicted criminal sexual psychopaths may be committed for treatment, and upon release must be returned to the custody of the court.

2. A person who has been guilty of a crime and who, if discharged, may endanger the public peace or safety, must be committed by the court to the Security Mental Health Ward at Anamosa.

The Board of Control may order a person in any of its institutions transferred to a mental health institute for care and treatment if he is thought to be mentally ill. Statutes governing such transfers exist for each type of institution, and although the regulations are generally similar, they do differ slightly in detail. Persons transferred to mental health institutes must be returned to the custody of the transferring institutions at the termination of treatment.

A Report on the

National (Invitational) Congress on Prepaid Health Insurance

Held at the Drake Hotel, Chicago, May 13-14, 1960

Climaxing a series of regional conferences that have been held during the past 12 or 18 months, organized medicine, organized labor, the commercial insurance industry, Blue Cross-Blue Shield and a liberal sprinkling of closed-panel men exchanged views recently at a meeting sponsored by the AMA. In all, there were 200 invited representatives of 30 national health organizations and 34 state medical societies.

The sessions helped to erase some suspicions that had existed, and some problems previously considered taboo were discussed altogether freely. In general, the participants agreed that voluntary —not government—health insurance is desirable.

Dr. J. L. Ludwig, chairman of the AMA Council on Medical Services, convened the first session, and along with some welcoming remarks made the definite statement that the AMA's sponsorship of this Congress should not be interpreted as indicating any change in the position of the AMA against compulsory national health care of the aged or of any other group. In welcoming the group on behalf of the trustees, members and staff of the AMA, Dr. F. J. L. Blasingame used a tone that appeared somewhat softer than Dr. Ludwig's. He indicated that the Congress was being sponsored by the AMA "to provide a medium for a realistic evaluation of means and methods of promoting the continued growth of voluntary health insurance." Americans, he said, want an insurance program that (1) will tolerate the test of time; (2) will avoid wastage; and (3) has built-in mechanisms for improvement.

Dr. A. O. Pitman, of Hillsboro, Oregon, sketched the background, beginning with the adoption of Resolution No. 5 from the Oregon Society at the Minneapolis Clinical Session in 1958. The most important "WHEREAS" in that resolution cited the need for communication among all types of prepaid plans at the national level as well as at the local.

Dr. Norman A. Welch, of Boston, speaker of the AMA House of Delegates, spoke on the AMA and voluntary health insurance. He made an excellent case, historically speaking, for the proposition that the voluntary prepaid health insurance system is directly in line with the development of democratic institutions, and asked three questions: (1) Is it possible to insure every aspect of medical care for a realistic premium? (2) Should we substitute a paternalistic government for a paternalistic employer? (3) Should we strive for so much security that all freedom is lost?

PRESENT PROBLEMS OF VOLUNTARY HEALTH INSURANCE

The first panel was titled "Present Status and Problems of Voluntary Health Insurance in the U. S." Dr. R. B. O'Connor, medical director for U. S. Steel, agreed that while progress can come with change, it isn't all synonymous with it. He seemed to agree that socialism is in conflict with freedom and growth, but he suggested deftly that all that isn't solo practice of medicine is not socialistic. He granted that individual self-determination has been undermined in recent years,

but he wasn't sure whether the loss of an individual's right to pick his own doctor was a part of that undermining.

The growth of private accident and health insurance, Dr. O'Connor said, is the greatest thing that has happened in all the history of insurance. That might indicate that it is the best answer to the health care problem—or at least it certainly puts the responsibility on its opponents to prove that it isn't.

Mr. E. J. Faulkner, of Lincoln, president of the Woodman Accident and Life Insurance Company, was next on the panel. He cited the growth of voluntary health insurance as a peculiarly American development, and deplored the irony of the fact that this development is caught up in the vortex of a world-wide conflict between individualism and collectivism. News media, he said, have "conveyed more propaganda than fact," and listed sophisms indulged in by opponents of the voluntary way: (1) that government can somehow create wealth; (2) that the individual is for some reason incompetent; and (3) that government can solve almost any problem better and more cheaply that individuals can solve it. The greatest problem of the insurance industry today, he said, is its necessity for defending itself against political attack. This has required thousands of man hours that could better have been spent planning and devising new ways for improving health insurance. Proponents of government interference, he said, cite the much greater increase in cost of medical care than in other costs during *recent* years, whereas the facts show that *in the last 20 years,* the cost of medical care has risen no more than have other living costs. Mr. Faulkner said he felt that the mystery should be taken out of medical care costs, and outlined some rather obvious activities of the Health Insurance Council for accomplishing that objective.

Mr. William McNary, of the Michigan Hospital Service, deplored the fact that the collision between doctors and non-medical groups is blunting the effect of attempts to improve medical care. He believes that both the patient and the doctor will suffer under lay administration where there is interference with a doctor's judgment on the medical aspects of a case. He threw out what he thought was a rather startling recommendation—that Blue Cross and Blue Shield should be one organization rather than two, since in the minds of the public such is the case already. He announced that on May 12 the Michigan Senate had passed a resolution appropriating $5,000 to investigate Blue Cross and Blue Shield. He is convinced that as medical care costs increase, there will be more and more legislative restriction, for the reasons that (1) such care is now considered to be a right, (2) it is increasingly expensive, and (3) it is in most every family's monthly budget.

Dr. F. D. Mott, of the Community Health Association, of Detroit, opened his presentation with the statement that group practice, whether union-sponsored, consumer-sponsored or doctor-sponsored, utilizes and still requires the individual physician to assure the most effective use of all medical facilities and specialties to save the money of the consumer and to conserve our professional resources. He said he felt that freedom to choose a prepayment plan should include the freedom to choose the group prepayment plan that is consumer-sponsored. Dr. Mott, in effect, deplored the attempts to "freeze out" doctors engaged in group practice, and indicated he felt strongly that group practices should be free from harassment from others in the medical profession.

Dr. C. C. Cutting, executive director of Permanente of Oakland, stated that the system he is most familiar with is economically sound, professionally satisfying and in the best interests of both the patients (700,000 of them), the doctors (650), the hospitals (12), the outpatient centers (360), and the rehabilitation centers (2). He made no bones about agreeing that policies must be determined by the doctors to insure sensitivity to the needs of the patient. He said he believes that the three yardsticks for good medical care are best provided by systems such as Permanente, those yardsticks being quality, availability and cost. At the same time, he admitted that any system that uses captive patients and captive doctors restricts the effectiveness of the medical care, and pointed out that a choice of plans is available to members of the Permanente Plan. He seemed to feel that under the Permanente system the continual appraisal of a physician by his fellow participating physicians worked to the advantage of the patient.

Dr. Donald H. Stubbs, of Washington, opened his remarks with three basic statements: (1) Prepayment is the business of medicine, whether we like it or not. (2) Doctors must become more involved in the guidance and direction of prepayment. (3) The doctor's best instrument for guiding and directing the development of prepayment is Blue Shield. Although five out of seven individuals in the United States have some sort of health insurance, only $2 out of every $7 in the nation's annual health care bill is paid by prepayment. Government encroachment, according to Dr. Stubbs, will be proportionate to medicine's failure to meet the challenge.

EXPERIMENTS WITH THE PREPAYMENT IDEA

The Friday afternoon panel was titled "Experiments in the Use of the Prepayment Idea." Mr. R. R. Shinn, of Metropolitan Life, spoke on the problem of major medical insurance as developed by his company, and listed eight attributes including free choice of physician, broad range of coverage, elimination of inside limits, deductible per year, coinsurance, reduction of discrimination between in- and outpatient care, liberal allowances for serious claims, and adaptability to change. He

reported that major medical insurance, which wasn't introduced until 1955, was being carried by 7.2 million people in 1959. This means to him that the American public wants major medical coverage, and that the insurance industry can and will provide it. He drew 10 conclusions: (1) The basic principles are sound. (2) Employees will buy it in exchange for first-dollar coverage, if properly informed and educated. (3) Plans in existence have not required many changes. (4) Claim experience in general has been favorable, doctors have been easy to deal with, and fees have increased very little. (5) Only 20 per cent of claims are for surgery. (6) Education of the patient, the doctor and the public is needed, along with patient participation in the payment of each bill, as a means of controlling excessive utilization. (7) Comprehensive coverage involving patient participation through coinsurance or deductibles does not seem to deter utilization. (8) It leads to the seeking of more specialized care without significant over-utilization. (9) Charges for routine procedures under comprehensive are often less than under first-dollar insurance. (10) The above features will enable a rapid broadening of insurance coverage. Along with practically all of the other speakers, Mr. Shinn declared that the greatest single advantage of the voluntary prepayment system is that it furnishes "a variety of plans to meet a variety of needs."

Mr. M. W. Shearer, manager of the Ross-Loos Medical Group, in Los Angeles, spoke for the private group-practice plans. That system, he feels, fits with the prepayment system. HIP involves over half a million persons, and his group only 130,000. It is his conclusion that private group-practice plans are usually formed to serve an earlier-organized prepayment plan, rather than the reverse. His information reflected that 16 group plans like his own will be available for federal employees when the program takes effect on July 1.

Dr. F. H. Good, of Denver, seemed to have developed somewhat the philosophy of a social worker. He stated that in Colorado, Blue Cross and Blue Shield have furnished care to the indigent more adequately and at less cost than would be possible from any other source. He believes that any health care plan for the indigent must include hospital, medical and surgical care for those over 65, must include free choice, and must have service benefits, uniform income limits and fixed fees determined by physicians, with the resultant premium determined by those fees.

Dr. L. K. Abrams, medical director of Union Health Service, Inc., Chicago, generalized that union health centers are no longer experiments, but rather are consumer efforts to fill gaps in previously-carried health care insurance. They provide more preventive care, and utilize group practice and prepayment. This group practice, Dr. Abrams believes, is the inevitable result of (1) specialization, (2) high cost of medical care, and (3) the rigors of being a doctor.

Dr. Charles E. Thompson, medical consultant for the Chicago Truck Drivers, etc., Independent Union, made probably the most interesting presentation. In the course of a very few months, this union has switched from a closed-panel group-practice prepayment plan to one which, while still union operated, provides completely free choice of physician and completely free choice of hospital, with no prescribed fee schedule. It has worked out definitely to the liking of all parties concerned, and the transcript of Dr. Thompson's remarks will bear close study.

Last on this panel was Dr. Donald B. Harrington, chairman of the Commission on Medical Services of the California Medical Association. He chose to speak on the San Joaquin Foundation for Medical Care, which is completely owned by the San Joaquin County Medical Society, is patient-oriented, involves fee-for-service, and provides complete freedom of choice. It utilizes insurance companies, has claims-paying departments in the county medical society's office, sets up professional and hospital standards, and has three standards of fees—one for private practice, one for the middle-income group, and one for the low-income group. Thus far, the Foundation covers 35,000 out of a total population of 220,000. He asserted that this type of foundation, of which there are several operating in California, is the mechanism whereby doctors interested in the status of their patients can best work with insurance companies in providing the care needed.

USE AND ABUSE OF HEALTH INSURANCE

The Saturday morning panel was titled "Let's Use, Not Abuse." In introducing the subject, Dr. Dorman, the moderator, listed six common abuses: overselling, loose drawing of contracts, use for uninsurable coverage, unnecessary tests, overcharging and overstaying. He cited as one of the principles governing insurance of any sort that the insurance method should not be used to pay for individual certainties.

Mr. Thomas Pansing, former commissioner of insurance for the State of Nebraska, pointed out that a state insurance commission protects the public against insurers, but is neither intended nor equipped for protecting insurers against the public or against the doctors. He did not rule out the possibility that insurance commissions *should* have that additional duty. It is his conviction that Blue Cross and Blue Shield plans are no more non-profit than are the policies of mutual commercial companies. He stated that resentment on the part of commercial companies against the "Blues" stems probably from the "no tax" angle and the lack of legal reserve requirements. (Dr. Dorman pointed out later that a good many "Blue"

plans are required by the National Association to have higher reserves than are legally required by insurance commissions.) Mr. Pansing suggested adroitly that the rushing to put the government into the health care field is a result of the fact that the socializers realize the job of providing health care to the American people may be accomplished quickly by voluntary means, and that they will thus lose their chance.

Dr. L. J. Raider, vice-president of United Medical Service, Inc., New York, categorized abuses of health insurance as illegal (i.e., fraudulent) and legal (unnecessary use). He declared that the greatest danger in abuse is that it involves a waste of money and tempts others to do likewise. He described three programs for controlling illegal abuses and two for controlling legal ones. The latter were (1) hospital review committees and (2) analyses of claim reports by the physician rather than by the individual subscriber. Dr. Raider recommended studies by the AMA to determine, percentagewise and dollarwise, the extents of legal and illegal abuses. He did not feel that such studies as have been made show that abuse is a significant factor in raising the costs of medical care insurance.

Dr. John G. Morrison, president of the Alameda-Contra Costa County Medical Society, described the use of usual or median fee studies in his county. He emphasized strongly that the system will not work without strong county medical societies and strong review committees. He too implied that abuses are sometimes real and sometimes imaginary.

Mr. Jerry Pollack, program consultant for the Social Security Department of UAW-CIO, reported that this year the American public will spend an average of $100 per capita for health care. Review, grievance or similar committees, he feels, should act when needed, rather than wait until a complaint has been made. He pointed out the obvious fact that gross abuses are evident enough to be easily handled, and the primary problem is the less flagrant abuses. He referred to what he called a split-level fee schedule, wherein an insurance dollar is not nearly so valuable as an individual's dollar. He played down the problem of overutilization, and pointed out that one primary purpose of prepayment was to increase the utilization of hospitals. The situation was simply that we couldn't stop this increase in utilization at exactly the right moment. Mr. Pollack made a strong plea for broadened coverage, but stated that with broadened coverage comes a need for stronger and more efficient controls.

Mr. Arthur M. Browning, of the New York Life Insurance Company, paid a tribute to the review committee system that is proving so successful in Alameda-Contra Costa County. The Health Insurance Council is studying this method for promotion in other areas. An interesting point came up during the question and answer period: Doctors in Alameda-Contra Costa make a charge for completing additional claim forms in cases of multiple coverage.

The problem of multiple coverage was not looked upon with any degree of alarm, except that Mr. Pansing suggested that legislation might be sought to rule it out as contrary to one of the cardinal principles of insurance, i.e., no profit from a claim. Mr. Pansing also issued a dire warning to the "Blues" about the importance of reserves. A shortage of reserves is not important in good times, but is vital in times of depression and recession. Whenever a company uses next quarter's premiums to pay this quarter's claims, it had better take a good hard look. Mr. Pollack felt that preventive care needs to be emphasized as a means of cutting down on surgery claims, that some opponents of government care are the least dedicated to the perfection of the voluntary system, and that the UAW and labor generally find themselves working hard to improve the voluntary system because "we need progress in our time."

He made two or three additional pithy statements: Primarily, abuses have come from the introduction of insurance to a new field. Any system of credit and sharing will be subject to abuse. Health care insurance is perhaps the highest form of insurance yet evolved, and is not subject to the hand-me-down controls of lower forms of insurance.

INCREASING DEMANDS VERSUS INCREASED COSTS

The Saturday afternoon panel was titled "Increasing Demands Versus Increased Costs." Dr. William A. Sawyer, medical consultant for the International Association of Machinists, Rochester, New York, exemplified the essence of the doctor-patient relationship of a generation ago as "go into the house for a call through the kitchen door, and thus find out more about the patient." While he did not completely discount the importance of the doctor-patient relationship, Dr. Sawyer said he was sure "we can never go back to that situation." He seemed to distinguish between a social responsibility to make available to all a high quality of medical care at a price they can afford. It seemed to be his theory that while this care is theoretically available to all, it actually is not, and he left the implication that making it universally available will involve all forms of prepayment, including group-practice, consumer sponsorship, etc. The goal of labor, he stated, is comprehensive health care on a prepaid basis for the entire family. Labor expects to pay for this care either through fringe benefits or through out-of-pocket prepayment, or a combination of both. He knows few labor families that can pay, other than on a prepayment basis, large medical bills. He counselled the examination of prepayment systems on the basis of (1) what does it purchase? and

(2) what does it fail to purchase? He definitely believes that group practice is a more economical method of providing medical care, and he wants to see a change in the situation wherein 73 per cent of the people have some degree of health care insurance, but their policies pay no more than 25 per cent of their total health bill.

Dr. Arthur Kemp, director of the AMA Department of Economic Research, provided his usual incisive analysis of often-overlooked but simple economic facts. He drew a careful distinction between the terms *price* and *cost*, on the one hand, referring to one unit of goods or services, and *expenditures*, on the other hand, applying to the quantity of goods and services. He thus implied that the biggest reason for increasing expenditures has not been rising costs but, rather, an increase in the quantity being used. He took exception to the criticisms of existing health care mechanisms in the U. S. as implying the assumption that an individual should not be required to provide for his own needs or wants—in fact should not be permitted to provide for them. With obvious exceptions he referred to this as "scarcely a philosophy applicable to responsible rational individuals in a free society." The greatest advantages of today's voluntary health care system, according to Dr. Kemp, are its flexibility and variety—again, a variety of plans for a variety of needs.

Mr. J. Milo Anderson, of the American Hospital Association, Rochester, New York, stated simply that "increasing demands always mean increasing costs." As to broadening of the scope of hospital services, he cited a recent study wherein it was revealed that 11 ancillary services appeared in 20 per cent more hospitals in 1956 than in 1950. A bit on the defensive side, he cited figures to prove that hotel-type services (board, room, etc.) have not increased in cost nearly so much as have the medical services of hospitals. Hospital personnel in 1956 constituted 1.48 per patient, and today sometimes 2.24. Hospitals are aware of and are working on possible remedies such as mechanization, progressive patient care, wider service under prepayment and reallocation of costs. Mr. Anderson questioned the value of progressive patient care in cutting down hospital costs, and cited the fact that 900 hospitals provide all of the nurses.

Mr. Charles A. Siegfried, of Metropolitan Life, theorized that deductible and coinsurance features put the premium dollar where it is most needed, i.e., to pay amounts that can be paid in no other way. Metropolitan studies have revealed that prospects for broader coverage seemed brighter where the employee pays part of the cost. He stated that it is one thing to provide a mechanism to pay a certain benefit, and distinctly another to convince people they should pay the necessary premium. He cited the average health-care cost per capita in the nation in 1959 as almost $100, and also figures from some comprehensive direct-service plans that provide it for approximately $50 per member.

In the discussion that followed, Dr. Kemp made a very cogent point. He said he would like to see the question of poverty separated from medical plans, implying that society shouldn't help all farmers just because they are farmers but only those farmers who are in poverty. Similarly, he asked, "Do we want to help the aged because they are aged, or do we want to help the poverty-stricken aged?"

CONFERENCE SUMMARY

Professor Walter J. McNerney, director of the Program in Hospital Administration at the University of Michigan, provided the conference summary. He complimented the AMA for providing this means of communication, and complimented the participants because, as he said, there had been no discernible attempt to exclude opposing points of view. He said he had detected definitely more or less complete agreement that there are a great many diverse plans for prepayment of health care that are working. He noted that every panelist and every group represented was definitely committed to prepayment. He deduced from the discussions that "consumer prejudices must be recognized, and either met or changed."

His last three points by way of summary, I thought, indicated his personal reaction, but were not necessarily contrary to the facts. He said that there is a definite need for more studies on the impact of deductibles, coinsurance, group practice, etc. He counselled that groups represented at this Congress must "go on from here," and suggested that the AMA might even include sessions on the economics of medical care at its annual meetings. His final statement was pithy and to the point: "Communication is healthy, but it is no excuse for inaction."

—GEORGE G. YOUNG, M.D., *Chairman*
ISMS Subcommittee on Prepayment Medical Care

THE DREAD ENEMY

We have a duty to oppose socialism wherever it appears, because socialism is ancient tryanny under a modern disguise. If we concern ourselves only with that aspect of socialism which confronts our own profession or our own business, we contribute to the advance of socialism on other fronts by our neglect, and we are open to the charge of being motivated only by self-interest. The "dread enemy" is *total state socialism!* When this comes, there will be no safe sanctuary for your freedom or for mine.

—Admiral Ben Moreel, USN (Retired)
Board Chairman of Americans for Constitutional Action

Iowa Chapter of the American Academy of General Practice

THE FAMILY DOCTOR

Before the era of antiseptic surgery and modern drug therapy, there was very little emphasis on physicians' academic education. Too often, no one knew the specific solutions for health problems. Today's family doctor, however, is a highly-trained physician, and he has at his disposal the latest equipment and the finest hospital facilities. He has spent many years learning to be a doctor. As a pre-medical student, he spent three or four years in a college or university gaining knowledge of the basic sciences. Next came four years in an approved medical school. After graduation, he worked for a year or more as a hospital intern. He may have taken a residency to add further to his medical training. Finally, after many years of education and training, he had become a skilled physician.

Yet, despite all of those continuous years of formal training, the physician of today never completes his medical education. The world of science and technology is moving ahead too fast for that. Progress continues to pour from laboratories and centers of research. He must constantly read, study, learn and strive to become an ever better doctor. He must be tireless not only in his solicitude for the sick people whom he is attending, but also in mastering the new technics and familiarizing himself with the new therapeutics that will enable him to continue being worthy of his patients' confidence and loyalty.

It was because of doctors' need for continuing postgraduate medical education that the American Academy of General Practice was founded in 1947. The Academy was the first medical association to insist upon its members' parallel progress. Its faith in this fundamental premise led to its postgraduate study plan. The By-laws of the organization clearly state that a member must complete 150 hours of postgraduate study every three years in order to qualify for reelection to membership. In addition, before a doctor can join the Academy he must show high professional ideals and moral standards, must be a member of his county and state medical societies, and must be actively engaged in the general practice of medicine and surgery.

In recent years, more and more families have learned that they need family doctors. Perhaps the family members may not see their doctor more often than once or twice a year, but they have the satisfaction of knowing that he is always available and anxious to help. Not only will he help them when they are ill, but he is particularly interested in keeping them from becoming ill. Today, thanks largely to the Academy, it is easy for anyone to find a trained family doctor. Every day, lists of member physicians are mailed to all corners of the nation. When this service was first announced in 1955, the Academy mailed over 100,000 lists in the first 90 days, in response to requests that it had received.

GP is the Academy's monthly publication. It is mailed to all Academy members and to many non-members who desire to learn more about medicine and surgery. GP is tailored to meet the requirements of the busy physician. The articles are carefully screened and are presented in a concise, readable style to give the reader information.

In line with postgraduate education, the Academy sponsors annual scientific assemblies, and it urges its members to attend postgraduate conferences sponsored by medical schools and postgraduate schools.

Thus, family doctors have opportunities to keep going to school, to keep studying and to make themselves ever better physicians. Encouraging them to do so is the principal function of the Academy.

Each family should have its family doctor, and the family members should make an effort to know their doctor so that he may know them.

Mark these dates on your calendar now!
September 18, 19, 20, 1960

ANNUAL MEETING AND SCIENTIFIC ASSEMBLY

Iowa Chapter
American Academy of General Practice
Savery Hotel, Des Moines

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

MORBIDITY REPORT FOR MONTH OF MAY, 1960

Diseases	*1960 May*	*1960 April*	*1959 May*	*Most Cases Reported From These Counties*
Diphtheria	0	0	0	
Scarlet fever	206	481	293	Jefferson, Johnson, Polk
Typhoid fever	0	0	0	
Smallpox	0	0	0	
Measles	388	320	1426	Cedar, Des Moines, Dubuque, Worth
Whooping cough	4	10	23	Cerro Gordo
Brucellosis	42	53	22	Scott
Chickenpox	268	830	423	Dubuque, Polk, Scott
Meningococcic meningitis	2	0	1	Hancock, Woodbury
Mumps	452	655	157	Dubuque, Polk, Pottawattamie, Scott
Poliomyelitis	0	0	1	
Infectious hepatitis	28	56	20	Cedar, Monona, Polk, Scott, Woodbury
Rabies in animals	20	12	14	Story, Washington
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	32	44	26	For the state
Syphilis	112	90	99	For the state
Gonorrhea	99	120	76	For the state
Histoplasmosis	1	0	0	Mahaska
Food intoxication	0	3	0	
Meningitis (type unspecified)	1	2	0	Dallas
Diphtheria carrier	1	0	0	Boone
Aseptic meningitis	0	0	0	
Salmonellosis	2	1	3	Floyd
Tetanus	0	0	1	
Chancroid	0	0	0	
Encephalitis (type unspecified)	0	0	1	
H. influenzal meningitis	0	0	0	
Amebiasis	7	1	0	Boone, Dubuque
Shigellosis	1	2	0	Scott
Influenza	0	220	13	

TYPHOID CASE AND CARRIER SUMMARY
Iowa—1959

During 1959, eight cases of typhoid fever were reported to the State Department of Health. Contrary to the usual situation in which known carriers are seldom responsible for new cases of typhoid fever, a carrier was responsible for four of the eight cases. This individual, an elderly woman, was discovered in 1951 when a grandson contracted the disease. Two of her daughters living in the same house with her developed typhoid fever during the first week of August, 1959. This carrier had been instructed in carrying out precautionary measures, and is visited by members of our staff periodically, but does not seem to be able to resist helping with food preparation.

Sources for the other four cases were not discovered. No organisms were isolated from them. Diagnoses were made on clinical findings and on titers.

During 1959, ten cases of paratyphoid fever were reported. Follow-up was done as on typhoid cases. They appeared to be unrelated. They occurred as scattered cases, and were caused by several different strains of salmonella.

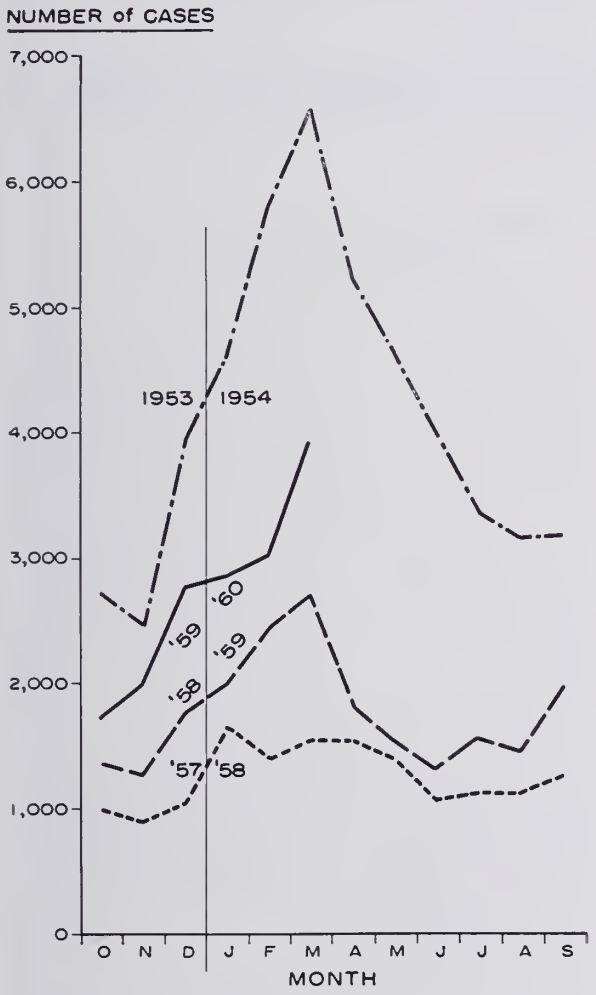
TYPHOID CARRIER SUMMARY AS OF DECEMBER 31, 1959, IOWA

Carriers added to registry during 1959	0
Carriers removed from registry since 1954	
By death	20
Following cholecystectomy	5
By removal to other states	4
By repeated negative cultures	0
Total carriers on registry as of December 31, 1959	55
Total number of questionable carriers (follow-up is incomplete)	9

Iowa's oldest carrier is 93, and its youngest is

28. The median age is 68, with seven over 80 and one under 40.

HEPATITIS CASES—UNITED STATES
Reported by Month for Selected Years*



* Data for 1953-54, 1957 and 1958 from Annual Supplements, NOVS. Figures for 1959 and 1960 from Weekly Morbidity and Mortality Reports, NOVS. Alaska and Hawaii included.

This chart shows the current nationwide increase in reported cases of infectious hepatitis that began in 1958-1959. The all-time high incidence was reached in 1953-1954, and thereafter a decrease occurred until recently.

Iowa, in 1954, reported 3,619 cases of infectious hepatitis when our rates were the highest in the nation. Cases were well reported at that time. The amount of gamma globulin available to the State Department of Health, in 1954, was great enough so that it could be sent to any physician for any number of infectious hepatitis contacts on whom he wished to use it. Later, with the decrease in gamma globulin available and the resultant increased restrictions on our distribution of it, the percentage of cases reported decreased, even as the rates of infection decreased.

Although fewer cases were reported in Iowa in 1959 as compared with 1958, we are certain that the disease is again increasing in the state, just as it is increasing nationally.

INFECTIOUS HEPATITIS CASES
REPORTED IN IOWA

BY YEAR

Year	*Cases*	*Year*	*Cases*
1949	2	1955	967
1950	17	1956	370
1951	80	1957	177
1952	755	1958	201
1953	1,118	1959	167
1954	3,619		

BY COUNTY IN 1959

County	*Cases*	*County*	*Cases*
Benton	1	Johnson	3
Black Hawk	1	Lee	4
Boone	1	Linn	3
Bremer	1	Mahaska	1
Carroll	2	Marion	4
Cass	2	Montgomery	1
Cerro Gordo	5	Muscatine	1
Cherokee	1	Page	10
Chickasaw	1	Palo Alto	5
Clinton	1	Polk	16
Dallas	2	Pottawattamie	5
Dickinson	3	Scott	27
Dubuque	20	Shelby	2
Fayette	3	Tama	1
Floyd	10	Union	6
Greene	5	Van Buren	1
Harrison	2	Winneshiek	3
Jackson	6	Woodbury	7

INFECTIOUS HEPATITIS DEATHS
REPORTED IN IOWA

Year	*Deaths*	*Year*	*Deaths*
1949	6	1955	10
1950	11	1956	18
1951	8	1957	10
1952	14	1958	7
1953	12	1959 (provisional total)	6
1954	15		

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529 Thirty-sixth Street, Des Moines 12.

LIVE POLIO VACCINE

A Statement by USPHS Surgeon General Leroy E. Burney

Public Health Service scientists have been attending a Second International Conference on Poliomyelitis which has been meeting [in Washington, D. C. during the week of June 6] under the auspices of the World Health Organization. During the past year, our staff have been following very closely the live virus trials in various parts of the world. This week, as a matter of fact, Dr. David E. Price, who served as my personal representative at a series of polio meetings in Moscow in mid-May, has made public a report on the use of live virus in the USSR during the past year.

I mention all of this activity to illustrate the very lively and hopeful interest the Service has in the development of a successful live virus vaccine against polio.

So far, the Service's technical experts and its technical advisers are not convinced that all of the technical problems have been fully resolved.

Among them are the significance of the changes which have been noted in the virulence of strains isolated after successive human passages, the effectiveness of the vaccines, and firm dosage recommendations, which would include the best method of administering the three types of live vaccine.

It is apparent from the reports coming out of the present conference that a tremendous amount of work has been carried out since the meeting a year ago. The material is voluminous and will require careful study and analysis. I have asked the Technical Advisory Committee on Poliomyelitis to undertake that analysis immediately to see whether or not the studies presented have provided adequate answers to the questions of changing virulence, potency and effectiveness.

Meanwhile, the Division of Biologics Standards is working with interested manufacturers to develop the necessary production controls for a safe, standardized product.

I want to emphasize very strongly that the Public Health Service and I, as surgeon general, have the responsibility for making sure that biological products are safe and effective. We take that responsibility very seriously. When the technical experts of the National Institutes of Health and their highly competent advisers are satisfied on these two points, it will be possible to license a live polio vaccine, but not before. How soon that will be, I do not know.

I should point out that, so far, only one manufacturer has applied for a license. This request was returned for additional information; and no applications are now pending.

In the meantime, we have in the Salk vaccine a proved and highly effective means for fighting polio. It has been administered to about 80 million Americans during the past five years, and, despite a high polio incidence in the summer of 1959, it has proved 90 per cent effective when the recommended course of injections is followed.

Unquestionably, a vaccine which can be administered orally and is less expensive to produce would represent another major advance in the fight against polio throughout the world.

We want to be very sure that it is entirely safe and fully effective. When these two principles are fully established by a qualified manufacturer, we will be happy to grant licenses for its production.

IMMUNIZATION MATERIALS FROM THE DIVISION OF MATERNAL AND CHILD HEALTH

The last of the poliomyelitis vaccine available to the State Department of Health under funds allocated to the state by congressional act was distributed to physicians in April. Now that immunization against poliomyelitis is an established procedure, distribution of the vaccine has been transferred from the Division of Preventable Diseases to the Division of Maternal and Child Health, of which Dr. Madelene Donnelly is the director.

The following is a list of the materials for immunization that are now available from the Division of Maternal and Child Health:

1. Triple toxoid, diphtheria, pertussis and tetanus
2. Double toxoid, diphtheria and tetanus
3. Smallpox vaccine
4. Poliomyelitis vaccine.

The above materials will be furnished without cost for children 18 years of age and younger, and poliomyelitis vaccine for pregnant women will be furnished under the following conditions:

1. For community or school clinics approved by the local medical society
2. To doctors requesting the material for patients who they feel are unable to pay the entire cost of immunization.

For other biologics and for their distribution, consult the Division of Preventable Diseases, of which Dr. Ralph H. Heeren is the director.

LARYNGOLOGY AND BRONCHOESOPHAGOLOGY

The Department of Otolaryngology at the University of Illinois College of Medicine will conduct a postgraduate course in laryngology and bronchoesophagology from October 17 to 29, 1960. Registration will be limited to 15 physicians, and instruction will be by means of animal demonstrations, and practice in bronchoscopy and esophagoscopy, diagnostic and surgical clinics, as well as didactic lectures.

Those who are interested are asked to write direct to the Department, 1853 West Polk Street, Chicago 12.

THE DOCTOR'S BUSINESS



Life Insurance Dividends

HOWARD D. BAKER

WATERLOO

The matter of dividend treatment frequently poses an important problem in the organization of an insurance portfolio. With regard to the disposition of dividends, there are four basic options that may be exercised on most participating life insurance contracts. Those options are:

1. The Cash Option. This provides that the annual dividends shall be paid in cash. In general, this option has little use for the average doctor who is building up his insurance program. It is of value only on paid-up participating policies, where the policyholder has no need for additional insurance and is no longer paying premiums against which the dividends could be offset.

2. The Premium Option. This arrangement provides that dividends will be used annually in partial satisfaction of premiums due. It is most useful for the young doctor who is building up a large insurance program and who wants *maximum* protection. He obviously can carry much more insurance if he pays only the net premium (premium less dividends), than he could if he used the dividends otherwise. If this doctor later improves his financial position or becomes uninsurable, he can change his election to a paid-up insurance option, if such a choice seems desirable at that time.

3. The Paid-up Insurance Option. This arrangement provides for the application of annual dividends to the purchase of paid-up additions to the life insurance policy. It is generally most useful to a doctor between 40 and 50 years of age who does not have as much insurance as he should carry or would like to have. It is also quite valuable to a man who has become uninsurable. In these situations, he can elect to have the dividends used to purchase paid-up additions that will increase his protection and will also maintain a cash value about equal to, or slightly greater than, the original dividends invested. Thus, he has the advantage of maximum protection but still retains a cash reserve for retirement or emergency use.

4. The Interest Option. Under this scheme, dividends are deposited with the company to accumulate at interest. This option is generally outmoded because of the low rate of return (2-2½ per cent), and because, with most low-net-cost companies, the paid-up additions will have a *cash value* equal to or in excess of the accumulation of dividends at interest over a period of years.

In general, this option would be worthy of consideration only on contracts where the policyholder retains the option of converting accumulated dividends and interest into paid-up insurance at any time. Such a privilege is quite rare on policies today.

SOMETIMES THE OPTION SHOULD BE CHANGED

What about the doctor who elected years ago to leave his dividends at interest? There are many who did so. Such a man now has a sizeable accumulation drawing between 2 and 3 per cent of *taxable interest.*

His individual situation should be reviewed, and he probably should change his dividend option. If he needs additional insurance protection, he should take a paid-up insurance option on future dividends, and should take it to whatever extent is possible on the accumulated dividends.

To the extent that paid-up additions are prohibited on the accumulation, it is our feeling that he should withdraw his money and invest it prudently elsewhere for a greater income and growth advantage. We should be inclined to give the same advice in situations where present insurance, reduced need for protection, and the possession of other assets make additional insurance unnecessary.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

Faerie Mae's bard has departed, and in his place is Lillian's. Let us hope the new muse behaves himself and uses this column for the transmission of information and inspiration, as is proper and customary. Surely, his faithful reading of the president's column in the past should have imbued him with the right ideas and attitude.

May brought flowers and showers, but your president scarcely noticed them, for her eyes were fixed firmly on Auxiliary work. Strangely enough, this brought on its own flowers and showers, but they were evident only to a select few. These came in expected and in unexpected areas.

An expected event occurred on May 14, when a selected, select group of representatives from the Iowa State Medical Society spoke to the senior medical students at SUI in Iowa City. The students proved to be an enthusiastic group. We were fortunate also in having in the audience their radiant, beautiful wives and sweethearts. Words of wisdom were of the essence. The panel delved into the areas of public relations, gave excellent tips on running a practice, offered advice on the decisions which must be made, and furnished inspiration on leading active lives as citizens of community and country. When it was over, my husband said, "I surely wish that experienced physicians had given us such good advice when we finished medical school!"

To sandwich the whole day into a few brief paragraphs, I must conclude by alerting Auxiliary members to the fact that my official speech was entitled "Medicine's Counterpart: The Woman's Auxiliary." I had a splendid opportunity to appeal for enthusiastic workers. Someday, somewhere, we shall learn whether our cause was helped or hurt.

Every one of you would love to attend every meeting of the Black Hawk County Medical Auxiliary—or you would IF the program announced by the incoming president materializes. None of the speakers has as yet been engaged, but she mentioned plans to have Elizabeth Taylor conduct a marriage clinic in October; to get Aimee Forand to defend his stand against socialized medicine at another meeting; to have Khrushchev organize a peace conference for the Black Hawk Auxiliary at any time he considers feasible; and to let Beverly Aadland and Sheryl Turner lead a discussion at the final meeting of the year on "What's Wrong With Today's Mothers."

Are any of the rest of you having program problems? If so, watch Black Hawk County's Gayle Telfer. She's terrific! Yes, I know that you have a good county president, too, but you must have expected that Black Hawk would steal the limelight this year. But if you want to have your say, why don't you write out your thoughts and send them to us for publication. We censor, reject or print all material.

Mrs. R. F. Nielsen
President

HOW A BILL BECOMES A LAW

The processes by which Forand-type or Flemming-type proposals can become law are of interest at this time. These proposals are currently being reviewed by the House Ways and Means Committee to which they were referred after their introduction.

A bill may be introduced by any member of the House or Senate. It is then referred by the presiding officer to an appropriate committee for study. This committee reports favorably or unfavorably on the original and amended bill. If the committee report is favorable, the bill is debated, amended, approved or disapproved in the house of its origin. If approved, it is sent to the other house and again referred to committee. This committee, after review of the bill, reports its approval, amendments or disapproval. It is debated, amended, and approved or disapproved this time by the second house. If differences arise, conferees are named to resolve the issues. When the bill has been finally approved by both houses, it is sent to the President for his signature. Through the use of his veto, the President may reject a bill, but a two-thirds vote of each house will overrule his veto.

The vast amount of mail, expressing opposition to the Forand Bill, had a definite influence on House Ways and Means Committee members. Continued opposition to Forand-type and Flemming-type proposals at each step in the legislative process can defeat these measures. We cannot afford to let up until the battle is won!

Janet Ellis
Legislative Chairman

IOWA AUXILIARY CONTRIBUTIONS TO AMEF

The Auxiliary to the Iowa State Medical Society surpassed its 1959-1960 goal by contributing more than $1 per member of the American Medical Education Foundation. County Auxiliaries and individual members gave a combined total of $1,060.20 prior to the May 30 deadline.

Individual contributions, in most cases, were memorials, and all gifts were earmarked for the College of Medicine at the State University of Iowa. A "gimmick" fund-raising idea used at the projects luncheon and a silent auction of a gift donated during the annual meeting brought in a total of $82.16. The State Auxiliary supplemented the county contributions with a donation of $303.

This excellent showing justifies our giving a "hats-off" cheer for Mrs. L. R. Hegg, of Rock Valley, for her untiring efforts as AMEF chairman.

ORGANIZED COUNTIES	
Appanoose	$ 10.00
Black Hawk	133.04
Clay	18.00
Clinton	17.50
Dallas-Guthrie	7.00
Des Moines	41.00
Grundy	20.00
Hamilton	5.00
Jefferson	5.00
Lee (North)	19.00
Marshall	25.00
O'Brien	7.00
Page	15.00
Pocahontas	10.00
Polk	143.00
Sioux	15.00
Wapello	15.00
Webster	58.00
Woodbury	25.00
Worth	6.00
MEMBERS-AT-LARGE	
Buena Vista	11.00
Cerro Gordo	1.00
Cherokee	5.00
Clarke	5.00
Crawford	6.00
Fayette	1.00
Hancock	5.00
Hardin	1.00
Jackson	1.00
Jasper	5.00
Lee (South)	7.50
Linn	1.00
Marion	5.00
Mills	1.00
Muscatine	1.00
Plymouth	10.00
Scott	4.00
Tama	1.00
Anonymous	4.00
Annual Meeting thru gimmick and silent auction	82.16
State Auxiliary	303.00
Direct to AMEF office	5.00
Total	$1,060.20

AUXILIARY TO S.A.M.A. FORMED AT IOWA CITY

The wives of medical students at S.U.I. attended an organizational meeting of a local chapter of the Woman's Auxiliary to the Student American Medical Association, in Iowa City on May 24. Dr. Adrian Flatt, an assistant professor of orthopedic surgery, headed the list of speakers. The others who spoke were Mrs. R. F. Nielsen, of Waterloo, president of the State Auxiliary, Mrs. Sally Snyder, of Chicago, regional director of the SAMA Auxiliary, and Messrs. Ben Bierbaum and Jim Hendricks, local SAMA representatives. The new group has affiliated itself with 46 other SAMA Auxiliaries in the nation, and it will operate under the sponsorship of the Woman's Auxiliary to the Iowa State Medical Society.

WOMAN'S AUXILIARY OFFICERS, 1960-1961

President Mrs. R. F. Nielsen, Cedar Falls
President-Elect Mrs. B. F. Kilgore, Des Moines
First Vice President Mrs. F. H. Entz, Waterloo
Second Vice President Mrs. G. S. Atkinson, Oskaloosa
Third Vice President Mrs. Emerson Dawson, Fort Dodge
Fourth Vice President Mrs. Manuel Brownstone, Clear Lake
Secretary Mrs. L. J. Henderson, Cedar Falls
Treasurer Mrs. J. H. Matheson, Des Moines

COUNCILORS

1st District Mrs. M. F. Kiesau, Postville
3rd District Mrs. L. R. Hegg, Rock Valley
4th District Mrs. F. C. Bendixen, LeMars
5th District Mrs. D. W. Todd, Guthrie Center
6th District Mrs. J. F. Gerken, Waterloo
7th District Mrs. N. L. Hersey, Independence
8th District Mrs. G. J. McMillan, Fort Madison
9th District Mrs. L. F. Catterson, Oskaloosa
10th District Mrs. C. A. Trueblood, Indianola
11th District Mrs. L. V. Larsen, Harlan

COMMITTEE CHAIRMEN

AMEF Mrs. R. W. Driver, Waterloo
Annual Meeting Mrs. Louis Goldberg, Des Moines
Auxiliary News Mrs. W. W. Sands, Des Moines
Civil Defense Mrs. S. P. Leinbach, Belmond
Courtesy and Doctors' Day . Mrs. Ralph Moe, Griswold
Endowments & Remembrances .. Mrs. G. H. Watters, Des Moines
Exhibits Mrs. N. W. Irving, Des Moines
Finance Mrs. E. A. Vorisek, Des Moines
Handicapped Craft Sales .. Mrs. J. L. Kestel, Waterloo
Health Careers Mrs. W. C. Shinkle, Des Moines
Health Educational Loan Fund Mrs. H. W. Smith, Woodward
History Mrs. C. H. Flynn, Clarinda
Legislation Mrs. H. G. Ellis, Des Moines
Mental Health Mrs. E. A. Larsen, Centerville
Nominating Mrs. G. A. Paschal, Webster City
Organization Mrs. F. H. Entz, Waterloo
Parliametarian Mrs. D. C. Wirtz, Des Moines
Press & Publicity Mrs. S. J. Zoeckler, Des Moines
Public Relations .. Mrs. Emerson Dawson, Fort Dodge
Publications Mrs. H. V. Kahler, Reinbeck
Revisions & Bylaws Mrs. L. R. Hegg, Rock Valley
Program & Yearbook .. Mrs. G. S. Atkinson, Oskaloosa
Safety Mrs. R. E. Hines, Des Moines

MEET YOUR MEMBERS

Candidate No. 2
Dietician Diversifies
Mrs. C. A. Trueblood

This general practitioner's wife is his active public relations officer and a mighty fine one!

Back in 1931 or '32, she was busy as a pioneer in the school hot lunch program in West Virginia and Kentucky mining communities. At this time she had just achieved her "of age" status. This was the beginning of many years of community service wherever she lived.

Here are some of the paths this dietician walks.

P.T.A. (Two daughters and one son stimulated her interest)

Camp Fire Girls (You understand this)

Den Mother (Repeat)

Y-teen (Repeat)

P.E.O.

Simpson Guild

Future Nurses

Auxiliary (County president and district councilor).

Her schedule still allows her to teach a young married persons' Sunday school class.

Her eyes are blue
And hair is brown;
Her useful life
Keeps her weight down.

Warren County—
It is her home.
We hope she now
Has ceased to roam.

The Saturday shows
Were not so good—
She changed that too.
You knew she could.

Her name is what
A doctor wants;
If you have this,
You won't be gaunt.

SAFETY SPELLDOWN

S is for Situations—accident prone;
We'll cut down their numbers, "pare to the bone."

A is for Awareness of dangers around,
And Action to take when danger is found.

F is for Future and Auxiliary plans,
Put safety up front as soon as you can!

E is for Education in matters of health;
A nation's good health is its greatest wealth.

T is for Travel—by air, car, or boat.
The safety belt habit we're asked to promote.

Y is for Yes, which our answer must be,
To make travel and home safe, for you and for me.

—MRS. FRANKLIN W. FRY
New York State Safety Chairman

POLK COUNTY AUXILIARY

The Woman's Auxiliary to the Polk County Medical Society honored over 200 members of the nine Future Nurses Clubs organized and conducted under its sponsorship, at a pinning ceremony and program on May 3 in the auditorium of the Des Moines Technical High School. The Auxiliary presented pins to 115 girls and two boys. Eligibility for a pin is achieved by active membership in a Future Nurses Club, and by rendering definite hours of service in related community health projects as well as performing duties that in many instances have been assigned to club members by their school nurses.

Dr. Daniel F. Crowley, Jr., of Des Moines, addressed the students, giving them a glimpse of some of the aspects of nursing work and of nurses' association with the medical profession and hospitals. The president of each club then reported on her organization's past activities and future plans.

The Polk County Medical Auxiliary closed its year with a "Mad Hatter's Brunch" at the Hyperion Field Club on May 13. One hundred per cent participation in the modeling of "mad hats" gave the judges a difficult time in arriving at their decision on the prize winners. Mrs. R. J. Reed was awarded first prize, and second prize went to Mrs. W. R. Powell. The awards were beautiful flower-and-ribbon hats. Following the installation of new officers, Mrs. Louis Goldberg, the retiring president, presented the gavel to Mrs. F. C. Coleman, her successor, and wished her the best in Auxiliary work for the coming year.

POLK COUNTY IS HONORED

At its May 13 meeting, the Polk County Auxiliary was presented a Service Award in recognition and appreciation of its distinguished service to the children of Des Moines, by the Des Moines Health Center. The presentation was made by Mrs. A. C. Westerhoff, executive director of the Center, a United Campaign agency housed in the new Hawley Building. She explained what the equipment that the Auxiliary provided will mean to the patients, as well as to the doctors and nurses who work at the facility.

Funds raised through the Polk County Auxiliary's Christmas card project last December have completely furnished two medical examining rooms, providing two examining tables, two gooseneck lamps for the tables, and two treatment cabinets. Each of the rooms will have door-plaques indicating that furnishings were provided by the Polk County Medical Auxiliary. The Auxiliary's contribution also bought otoscope sets and ophthalmoscope sets for two rooms, two sphygmomanometers with child's cuffs, four examining stools, an autoclave, and one stainless steel utility cart for the nurses' use.

MINUTES OF THE 1960 SESSIONS OF THE HOUSE OF DELEGATES

Iowa State Medical Society
Des Moines, Iowa—April 24-27, 1960

(Alphabetical Index to the Minutes Can Be Found on Page 458)

SUNDAY SESSION, APRIL 24, 1960

The House of Delegates of the Iowa State Medical Society was called to order by the speaker, Dr. C. V. Edwards, Sr., of Council Bluffs, at 10:00 a.m., Sunday, April 24. The House of Delegates approved the taking of attendance by signed registration cards. There were 129 delegates, 4 voting alternates and 17 ex-officio members present.

County	*Delegate*	*Alternate*
Adair	C. D. Shope	
Adams	C. L. Bain	
Allamakee	A. F. Wiley	
Appanoose	E. A. Larsen	
Audubon	L. E. Jensen	
Benton	J. E. Blumgren	
Black Hawk	T. L. Trunnell	
	C. D. Ellyson	
	R. C. Miller	
	F. G. Loomis	
Boone	R. L. Wicks	
Bremer	R. E. Shaw	
Buchanan	R. L. Knipfer	
Buena Vista	H. E. Farnsworth	
Butler	F. A. Rolfs	
Calhoun	C. R. Wilson	
Carroll	R. J. Ferlic	
Cerro Gordo	G. J. Sartor	
	L. W. Swanson	
	J. W. Lannon	
Cherokee	D. C. Koser	
Chickasaw	P. C. Richmond	
Clarke	G. I. Armitage	
Clay	D. H. King	
Clayton	E. G. Kettelkamp	
Clinton	V. W. Petersen	
	R. O. Emmons	
Crawford	J. M. Hennessey	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	W. D. Haufe	
Decatur	E. E. Gamet	
Delaware	R. E. Clark	
Des Moines	F. G. Ober	
	E. P. Russell	
Dickinson	D. F. Rodawig, Sr.	
Dubuque	D. F. Ward	
	R. J. McNamara	
	L. P. Alt	
Emmet	R. J. Dawson	
Fayette	A. F. Grandinetti	
Floyd	R. A. Fox	
Franklin	R. E. Munns	
Green	R. E. Jongewaard	
Grundy		H. V. Kahler
Hamilton	G. A. Paschal	
Hancock-Winnebago	J. R. Camp	
	J. T. Mangan	
Hardin	J. J. Shurts	
Harrison	A. C. Bergstrom	
Henry	P. G. Couchman	
Howard	C. W. Rainy	
Humboldt	M. L. Northup	
Jasper	R. F. Frech	
Jefferson	K. H. Strong	
Johnson	K. R. Cross	
	R. H. Flocks	
		Michael Bonfiglio
	W. M. Kirkendall	
	J. M. Layton	
	C. E. Schrock	
	S. C. Ware	
	A. C. Wise	
Jones	L. D. Caraway	
Keokuk		J. S. Hooley
Kossuth	M. G. Bourne	
Lee	L. C. Pumphrey	
Linn	J. J. Keith	
	John Parke	
	J. J. Redmond	
	L. J. Halpin	
	J. T. Hecker	
Lucas	H. D. Jarvis	
Lyon	G. D. Bullock	
Madison	J. E. Evans	
Marion	Peter Van Zante	
Marshall	O. D. Wolfe	
	L. O. Goodman	
Mills	M. L. Scheffel	
Mitchell	R. J. Smith	
Monona	J. L. Garred	
Montgomery	Oscar Alden	
Muscatine	K. E. Wilcox	
Page	W. G. Kuehn	
Palo Alto	G. H. Keeney	
Plymouth		W. L. Downing
Pocahontas	J. M. Rhodes	
Polk	D. F. Crowley, Jr.	
	E. T. Burke	
	R. A. Dorner	
	B. C. Barnes	
	D. O. Newland	
	R. B. Stickler	
	M. E. Alberts	
	J. T. Bakody	
	S. J. Zoeckler	
	J. E. Gustafson	
	P. K. Hughes	
	N. W. Irving	
	A. N. Smith	
Pottawattamie	H. W. Mathiasen	
	F. N. Weber	
	G. H. Pester	
Poweshiek	J. C. De Meulenaere	
Ringgold	D. E. Mitchell	
Sac	J. W. Gauger	
Scott	A. B. Hendricks	
	J. F. Bishop	
	J. H. Sunderbruch	
	P. E. Gibson	
Shelby	G. E. Larson	
Sioux	M. O. Larson	
Story	G. E. McFarland, Jr.	
	G. E. Montgomery	
Tama	A. J. Wentzien	
Taylor	R. W. Boulden	
Union	H. J. Peggs	
Van Buren		K. Furumoto
Wapello	P. D. McIntosh	
	K. E. Lister	
Warren	C. A. Trueblood	
Washington	M. L. McCreedy	
Wayne	C. N. Hyatt	
Webster	H. H. Kersten	
	R. W. Lee	
Winneshiek	A. F. Fritchen	
Woodbury	H. E. Rudersdorf	
	J. W. Bushnell	
	P. M. Cmevla	
Worth	W. G. McAllister	
Wright	C. P. Hawkins	

DELEGATES AT LARGE
J. W. Billingsley
E. C. Lowry

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

E. F. Van Epps
R. F. Birge
H. J. Smith
G. H. Scanlon

S. P. Leinbach
R. M. Dahlquist
J. E. Houlahan
M. A. Blackstone
C. W. Seibert
C. E. Radcliffe
G. S. Atkinson
L. V. Larsen
R. N. Larimer
F. C. Coleman
C. V. Edwards, Sr.
W. D. Abbott
Fred Sternagel

Minutes of the April 22, Meeting of the House of Delegates were approved as published in the July, 1959, JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. The speaker outlined procedures to be followed in conducting the business of the House of Delegates and announced the appointment of reference committees, stating that the reference committees would be expected to begin their hearings during the afternoon (Sunday) following the adjournment of the House of Delegates.

Reports as published in the 1960 HANDBOOK FOR THE HOUSE OF DELEGATES were approved, except for the report of the Subcommittee on Medical Services to the Indigent which was referred to the Reference Committee on Legislation and Public Relations for study and report.

Reports of Officers

FROM THE OFFICE OF THE SECRETARY

Following last year's format, the 1960 Secretary's Report will include a summary of general activities of the Iowa State Medical Society, in addition to the usual membership information.

1960 ANNUAL MEETING

Last year's Annual Meeting ended Wednesday, April 22. On Sunday, April 26, the Program Committee held its first meeting to plan the 1960 program. It met again on May 17 and June 21. The schedule of this year's Annual Meeting will follow the 1959 pattern. No section meetings have been arranged, and specialty groups will hold their sessions on Monday evening. The banquet will be on Tuesday evening, and it will be followed by the Woman's Auxiliary benefit dance.

HOUSE OF DELEGATES

Minutes of the 1959 sessions of the ISMS House of Delegates were published in the July, 1959, issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY. The usual administrative procedures in connection with House of Delegates directives have occurred. This year, the House of Delegates will meet for the first time on Sunday, April 24, at 10 a.m. Reference committee hearings will begin as soon as possible on Sunday afternoon following the adjournment of the House.

The new procedure for appointment and meetings of the Nominating Committee was effected this year, in accordance with the 1959 changes in the ISMS Articles of Incorporation and By-Laws.

EXECUTIVE COUNCIL

Two meetings of this interim policy-making body have been held since the 1959 Annual Meeting. Progress reports from important committees of the Society were presented to the Executive Council for its action in some instances, and as information in others. These included: Group Insurance, Automotive Safety, Veterans' Affairs, Public Health, Iowa Bar Liaison, Policy Evaluation, Medico-Legal, Educational and Scientific Trust, Chiropractic, Medical Service to the Indigent, Relative Value Study, Utilization and Fee, Prepayment, Mental Health, Polio, Legislative, and Iowa Physicians Political League, as well as the Board of Trustees and the Judicial Council. Miscellaneous items considered by the Executive Council involved the following: Group programs—life, disability and Blue Cross-Blue Shield; Standard Health Insurance Claim reporting form; the broadened chapter aid program of the National Foundation; problems of nursing homes; physician-hospital relations; the new section in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY entitled "In the Public Interest"; American Medical Education Foundation; AMA public education campaign; the problem of doctor supply; the selection of Iowa's candidate for the office of trustee of the AMA; and miscellaneous resolutions from county societies.

JUDICIAL COUNCIL

The Judicial Council, the Society's judicial authority, has held six meetings since the 1959 Annual Meeting, including its organizational meeting on April 22, 1959, at which time Dr. John Sunderbruch, of Davenport, was re-elected chairman, and Dr. Harold J. Peggs, of Creston, was re-elected secretary. The Judicial Council's major responsibility has been the approval of applicants for ISMS membership. It has considered and disposed of various items of business involving memberships, ethics and other judicial matters.

COMMITTEES

The Society has 47 standing and special committees, most of which have met at least once during the year. Reports covering the activities of these groups appear elsewhere in this HANDBOOK, or will be presented as oral reports at the first session of the House of Delegates in April. To date, approximately 118 official committee meetings have been held, and prior to the Annual Meeting there will be numerous additional ones. These totals do not include informal meetings of committee members, or the conferences that have taken place by telephone.

LIAISON WITH COUNTY MEDICAL SOCIETIES

Officers and other members of the Society, as well as staff personnel, have met with a number of county medical societies during the past year. The programs for these meetings covered various projects of the Society.

FIELD SERVICE

The major field work this past year has involved individual physician contacts by Messrs. Gerald Buckles and Julian Serrill, the ISMS field secretaries. They have been assisted in this effort by the Blue Shield field men, particularly in reference to problems involving Blue Shield. ISMS field services were curtailed to a great extent as of January 1, 1960, when Mr. Buckles was made available on a half-time basis to serve as field consultant for the AMA in Iowa and Minnesota. Of necessity, Mr. Serrill, the other field secretary, had to assume Mr. Buckles' committee work, including the activities of the Legislative Committee, Chiropractic Committee, Osteopathic Committee, etc. This additional administrative responsibility automatically interfered with his field service work.

GENERAL MAILINGS

The mailings issued during the year were double the number of the previous year: general news bulletins 15; legislative bulletins 5; legislative contact men mailings 11; Public Relations Committee mailings 2; and interim letters to legislators 5. THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY is relied upon to transmit general information to the membership.

NATIONAL CONFERENCES

National conferences attended by one or more representatives of the Iowa State Medical Society have included meetings of the AMA, the AMA Conference on Physicians and Schools, AMA Public Relations Conference, Medical Society Institute for Organizational Management, two Conferences on Aging, Mental Health Conference, Blue Shield Public Relations Conference, National Legislative Conference, AMA Prepayment Conference, AMA Program on Government and Private Programs, Congress on Medical Education and Licensure, Conference on Rural Health, Blue Shield Professional Relations Conference, Conference with Iowa Senators and Congressmen, National Meeting of Medical Assistants, American Medical Education Foundation, State Medical Journal Editors' Conference, AMA Public Relations Advisory Committee, Medico-Dental-Hospital Bureau Association Liaison Committee, and Medical Society Executives' Association.

REGIONAL CONFERENCES

These conferences attended by ISMS members and/or personnel included: North Central Medical Conference, Regional Conference on Aging, Midwest Careers Workshop, and Medicare Conference. The Annual Meeting of the State Medical Society of Wisconsin was attended by the ISMS president.

STATE CONFERENCES

ISMS members and/or employees have participated in the following during the past year: Joint Conference of ISMS and Iowa Pharmaceutical Association, monthly meetings of the Joint Council on Health Care of the Aged, annual meetings of Blue Cross and Blue Shield, annual meeting of Iowa Interprofessional Association, Iowa Interprofessional Association's Civil Defense Conference, Conference on Adoption Laws, Hawkeye Science Fair, Iowa Dental Association Annual Meeting, Senior Day at Iowa City, Iowa Division of American Cancer Society, Chamber of Commerce conferences on political action, ISMS State Legislative Conference, and the annual meeting of the Iowa Nursing Home Association.

IOWA REPRESENTATION AT NATIONAL LEVEL

The State Society has continued its close liaison with the AMA, with Blue Shield Medical Care Plans, and with other national organizations. The ISMS is represented on the AMA Council on Rural Health by Dr. Samuel P. Leinbach, of Belmond; on the Committee on Federal Medical Services by Dr. D. C. Conzett, of Dubuque; on the Council of Legislative Activities by Dr. F. C. Coleman, of Des Moines; and on a committee that is studying revisions of the constitution and by-laws of the AMA scientific assembly by Dr. D. F. Ward, of Dubuque. The ISMS executive director completed his three-year term on the AMA Public Relations Advisory Committee in 1959, and is a member of the board of directors of the Medical Society Executives' Association and chairman of the MSEA-Medical Dental Hospital Bureau of America Liaison Committee. Dr. Conzett is president of the Conference of State Presidents, Secretaries and Other Officers.

SERVICES TO THE WOMAN'S AUXILIARY

Full facilities of the ISMS have been made available to the Woman's Auxiliary to assist it in carrying out its projects. However, the bulk of this work is handled by an executive assistant, Mrs. Hazel Lammey, who is staff secretary to the Auxiliary. The Society's staff has been represented at the following Auxiliary meetings: Woman's Auxiliary board meetings, executive board meetings, practical nurses' conferences, Conference on Nursing Careers, National Conference of State Auxiliary Officers, conferences with the Auxiliary committee responsible for planning the organization's annual meeting, Careers Workshop of the Midwestern Regional Council of State Leagues of Nursing, and numerous conferences with Auxiliary committee chairmen. The staff handles mailings of various types for the Woman's Auxiliary.

Other administrative responsibilities that the Society's staff assumes for the Woman's Auxiliary include making arrangements for the group's annual meeting, preparing its annual reports, maintaining its membership records and roster, and preparing the issues of the WOMAN'S AUXILIARY NEWS.

ISMS MEMBERSHIPS

Memberships in the Iowa State Medical Society during the year 1959 remain at 2,438. There were 69 counties in which 100 per cent of the county society members held membership in the ISMS, representing an increase over 67 in 1958. In 1959 there were 55 eligible non-members as compared with 60 in 1958. The number of ineligible non-members decreased from 63 in 1958 to 52 in 1959. Physicians retired or not in practice decreased from 106 in 1958 to 105 in 1959. The total membership percentage in 1959 was 98, representing an increase over 1958.

COUNTY SOCIETIES HAVING 100 PER CENT MEMBERSHIP IN ISMS IN 1959

Adams	Hamilton	Osceola
Allamakee	Hardin	Page
Audubon	Harrison	Palo Alto
Boone	Henry	Plymouth
Bremer	Howard	Pocahontas
Butler	Humboldt	Polk
Calhoun	Ida	Pottawattamie
Carroll	Iowa	Ringgold
Cerro Gordo	Jackson	Sac
Cherokee	Jasper	Scott
Chickasaw	Jefferson	Shelby
Clarke	Kossuth	Sioux
Clay	Lee	Tama
Crawford	Lucas	Taylor
Dallas-Guthrie	Lyon	Union
Davis	Madison	Van Buren
Delaware	Mahaska	Wapello
Des Moines	Marshall	Warren
Dickinson	Monona	Washington
Floyd	Monroe	Wayne
Franklin	Montgomery	Webster
Greene	Muscatine	Winneshiek
Grundy	O'Brien	Wright

1959 ISMS MEMBERSHIP RECORD

County	Active Members	Associate Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage
Adair	3	1	1	..	..	80
Adams	4	..	..	..	..	100
Allamakee	6	..	..	..	2	100
Appanoose	11	..	2	..	2	85
Audubon	4	..	..	..	2	100
Benton	16	..	1	..	..	94
Black Hawk	112	..	1	..	1	99
Boone	16	1	..	..	..	100
Bremer	17	..	..	..	..	100
Buchanan	15	..	1	8	1	94
Buena Vista	14	..	1	..	..	93
Butler	8	..	..	..	..	100
Calhoun	12	..	..	..	1	100
Carroll	24	1	..	..	..	100
Cass	10	..	1	1	..	91
Cedar	8	..	1	..	..	89
Cerro Gordo	67	1	..	..	..	100
Cherokee	18	..	..	12	1	100
Chickasaw	11	..	..	..	..	100
Clarke	6	..	..	..	..	100
Clay	13	..	..	..	..	100
Clayton	9	1	1	..	1	91
Clinton	49	..	1	2	..	98
Crawford	7	..	..	..	..	100
Dallas-Guthrie	25	..	..	6	..	100
Davis	14	..	..	..	..	100
Decatur	6	..	1	..	1	86
Delaware	10	..	..	1	1	100
Des Moines	44	..	..	..	..	100
Dickinson	8	..	..	..	..	100
Dubuque	73	2	1	..	2	99
Emmet	15	..	1	..	..	94
Fayette	21	1	3	..	1	88
Floyd	18	..	..	..	..	100
Franklin	8	..	..	..	..	100
Fremont	6	..	1	..	1	86
Greene	17	..	..	..	1	100
Grundy	9	..	..	..	..	100
Hamilton	12	1	..	1	..	100
Hancock-Winnebago	16	..	1	1	1	94
Hardin	20	..	..	..	..	100
Harrison	8	..	..	..	3	100
Henry	18	..	..	6	1	100
Howard	9	..	..	..	..	100
Humboldt	8	..	..	..	..	100
Ida	6	..	..	..	2	100
Iowa	12	..	..	..	..	100
Jackson	13	..	..	..	..	100
Jasper	19	..	..	2	..	100
Jefferson	11	..	..	..	1	100
Johnson	188	1	8	..	5	96
Jones	15	..	2	..	..	88
Keokuk	6	..	1	1	..	86
Kossuth	11	..	..	1	2	100
Lee	38	..	..	..	1	100
Linn	127	2	2	..	5	98
Louisa	2	..	3	..	..	40
Lucas	8	..	..	..	..	100
Lyon	7	..	..	..	..	100
Madison	6	1	..	..	..	100
Mahaska	19	..	..	..	..	100
Marion	17	..	11	..	11	61
Marshall	38	..	..	..	..	100
Mills	6	..	2	2	..	75
Mitchell	10	..	2	..	2	83
Monona	10	..	..	..	1	100
Monroe	6	1	..	..	..	100
Montgomery	13	..	..	..	..	100
Muscatine	21	..	..	1	1	100
O'Brien	13	1	..	..	..	100
Osceola	6	..	..	..	..	100
Page	21	..	..	10	..	100
Palo Alto	12	..	..	..	1	100
Plymouth	10	..	..	..	2	100
Pocahontas	8	..	..	1	1	100
Polk	313	11	..	2	19	100
Pottawattamie	71	..	..	1	5	100
Poweshiek	10	..	2	..	..	83
Ringgold	5	..	..	..	..	100
Sac	9	..	..	..	..	100
Scott	105	..	..	..	4	100
Shelby	9	..	..	..	3	100
Sioux	10	..	..	..	1	100
Story	47	..	1	..	..	98
Tama	12	..	..	..	1	100
Taylor	3	..	..	..	..	100
Union	14	..	..	..	..	100
Van Buren	4	..	..	..	..	100
Wapello	54	..	..	..	..	100
Warren	7	1	..	..	2	100
Washington	12	..	..	..	2	100
Wayne	6	..	..	..	..	100
Webster	54	..	..	..	2	100
Winneshiek	10	..	..	..	1	100
Woodbury	124	3	1	2	6	99
Worth	4	..	1	..	..	80
Wright	20	1	..	..	1	100
	2,407	31	55	52	105	98

REPORT OF THE TREASURER

The following financial statements for the year 1959 outline the economic position of your State Society. It is particularly noteworthy that even though the number of activities carried on by the Society has continued to increase, an addition has been made to Society reserves. ISMS receipts and expenditures for 1959 reflect approximately equal increases (about 4 per cent) over the previous year. Therefore, as in 1958, an increase has been shown in the net worth of the Society.

As in past years, the Baldridge-Beye Memorial Fund was contributed to the American Medical Education Foundation, earmarked for the State University of Iowa College of Medicine. The 1959 contribution of $2,834.00 consisted of $2,134.00 from the assignment of $1.00 for each dues-paying member and $700 from repayments made on Baldridge-Beye loans during this past year.

H. J. SMITH, M.D., *Treasurer*

IOWA STATE MEDICAL SOCIETY

Balance Sheet—December 31, 1959

ASSETS

Current Assets:		
ISMS Checking Accounts	$ 440.88	
ISMS Savings Accounts	19,268.08	
Corporation Stock	25,271.74	
Government Bonds	68,487.96	
Notes Receivable (Baldridge-Beye)	2,478.00	
Medicare	5,000.00	
Pension Insurance Due From Employees	770.04	
Total Current Assets		$121,716.70

Fixed Assets:		
Land	$ 5,000.00	
Building	$44,822.50	
Less: Reserve for Depreciation	10,000.00	34,822.50
Net Fixed Assets		39,822.50
TOTAL ASSETS		$161,539.20

LIABILITIES AND NET WORTH

Liabilities:		
State Personal and Property Tax	$ 1,628.31	
Baldridge-Beye Memorial Fund: Balance 12-31-59	2,478.00	
TOTAL LIABILITIES		$ 4,106.31
Net Worth:		
Balance 12-31-59	$142,371.10	
Add: Net Income 1959	15,061.79	
Total Net Worth		$157,432.89
TOTAL LIABILITIES AND NET WORTH		$161,539.20

IOWA STATE MEDICAL SOCIETY
STATEMENT OF INCOME AND EXPENSES

For the Year Ended—December 31, 1959

Income for the Year 1959:		
Dues—State Society	$159,756.40	
Dues—AMA	51,880.00	
ISMS Educational Fund	21,297.50	
JOURNAL Advertising	51,989.46	
JOURNAL Reprints	2,941.89	
Annual Session	12,920.00	
Medicare	5,298.62	
Miscellaneous	269.78	
AMA Collection Commission	518.62	
Gain on Sale of Stock	194.43	
Dividends—Corporation Stock	875.00	
Interest—Government Bonds	762.50	
Interest—Savings Accounts	600.49	
Interest—Notes Receivable	150.20	
TOTAL INCOME		$309,454.89
Expenses for the Year 1959:		
Annual Session	$ 12,772.25	
Baldridge-Beye Memorial Fund	2,134.00	
Committee Expense:		
Grievance	1,755.66	
Health Education	25.41	
Legislation	12,000.00	
Medical Education and Hospitals	183.85	
Medical Service	1,690.96	
Public Health	1,354.09	
Public Relations	3,855.70	
Other Committees	3,470.45	
Council Expense	1,589.95	
County Society Services	1,866.04	
Depreciation—Building	3,620.77	
Depreciation—Office Furniture and Fixtures	1,098.74	
Dues—AMA	51,842.50	
Dues and Subscriptions	1,421.30	
General Administrative Expense	1,238.72	
Insurance	1,151.84	
ISMS Educational Fund	21,297.50	
Janitor Supplies	43.99	
JOURNAL—Printing and Engraving	41,191.26	
JOURNAL—Reprints	3,526.42	
Legal Expense	6,000.00	
Light, Gas and Water	1,257.24	
Office Stationery and Supplies	3,399.10	
Pension Insurance	3,131.77	
Postage	3,560.84	
Repairs and Maintenance	324.82	
Salaries	81,584.47	
Salaries—Outside Secretary	1,210.27	
Service Contracts—Machines	460.24	
Taxes:		
Personal and Property	1,628.31	
Social Security	1,459.83	
Unemployment—Federal	130.25	
Unemployment—State	97.69	
Use Tax	839.45	
Telephone and Telegraph	3,997.71	
Travel—Officer	4,652.71	
Travel—Salaried Employee	6,324.24	
Trustee Expense	3,956.47	
Woman's Auxiliary	1,246.29	
TOTAL EXPENSES		$294,393.10
Net Income for 1959		15,061.79

BOARD OF TRUSTEES

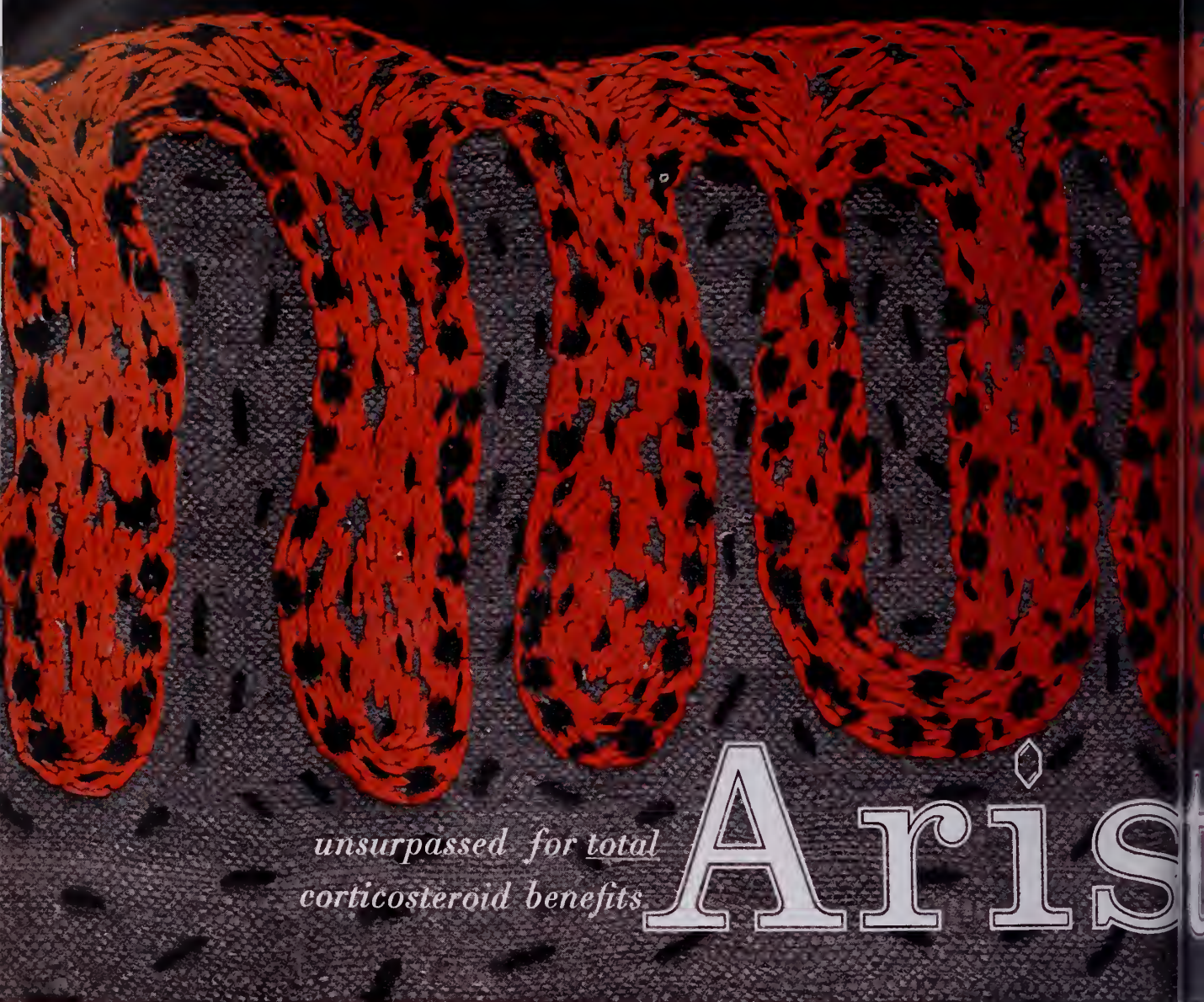
The Board of Trustees will present a comprehensive report of its activities at the first session of the House of Delegates, in April. Since, excepting for the development of policy, the Board of Trustees performs duties approximately the same as those of the board of directors of any corporation, it is involved in most of the Society's activities, and thus the entire contents of this HANDBOOK, constitute an accounting of the Board's fulfillment of its responsibilities. Special attention should be given to the reports of the secretary and the treasurer.

Report of the Judicial Council

FIRST DISTRICT

During the past year, there has been a definite quickening of interest in the problems of organized medicine. A number of counties are awaiting with interest the progress report on Blue Shield which is expected to present the changes that are deemed necessary in the Senior 65 policy.

in allergic and inflammatory skin disorders (including psoriasis)



unsurpassed for total corticosteroid benefits

Aris

Substantiated by published reports of leading clinicians

- **effective control** of allergic and inflammatory symptoms[1-3,7,8,12-15,17,18]



- **minimal disturbance** of the patient's chemical and psychic balance[1,4-18]



At the recommended antiallergic and anti-inflammatory dosage levels, ARISTOCORT means:

- **freedom from salt and water retention**
- **virtual freedom from potassium depletion**
- **negligible calcium depletion**
- **euphoria and depression rare**
- **no voracious appetite — no excessive weight gain**
- **low incidence of peptic ulcer**
- **low incidence of osteoporosis with compression fracture**

Precautions: With ARISTOCORT all traditional precautions to corticosteroid therapy should be observed. Dosage should always be carefully adjusted to the smallest amount which will suppress symptoms.
After patients have been on steroids for prolonged periods, discontinuance must be carried out gradually over a period of as much as several weeks.
Supplied: 1 mg. scored tablets (yellow); 2 mg. scored tablets (pink); 4 mg. scored tablets (white); 16 mg. scored tablets (white).
Diacetate Parenteral (for intra-articular and intrasynovial injection). Vials of 5 cc. (25 mg./cc.).

References: 1. Feinberg, S. M.; Feinberg, A. R., and Fisherman, E. W.: *J.A.M.A.* 167:58 (May 3) 1958. 2. Epstein, J. L., and Sherwood, H.: *Conn. Med.* 22:822 (Dec.) 1958. 3. Friedlaender, S., and Friedlaender, A. S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958. 4. Segal, M. S., and Duvenci, J.: *Bull. Tufts N.E. Medical Center* 4:71 (April-June) 1958. 5. Segal, M. S.: Report to the A.M.A. Council on Drugs, *J.A.M.A.* 169:1063 (March 7) 1958. 6. Hartung, E. F.: *J. Florida Acad. Gen. Practice* 8:18, 1957. 7. Rein, C. R.; Fleischwager, R., and Rosenthal, A. L.: *J.A.M.A.* 165: 1821 (Dec. 7) 1957. 8. McGavack, T. H.: *Clin. Med.* (June) 1959. 9. Freyberg, R. H.; Berntsen, C. A., and Hellman, L.: *Arthritis & Rheumatism* 1:215 (June) 1958. 10. Hartung, E. F.: *J.A.M.A.* 167:973 (June 21) 1958. 11. Zuckner, J.; Ramsey, R. H.; Caciolo, C., and Gantner, G. E.: *Ann. Rheumat. Dis.* 17:398 (Dec.) 1958. 12. Appel, B.; Tye, M. J., and Leibsohn, E.: *Antibiotic Med. & Clin. Ther.* 5:716 (Dec.) 1958. 13. Kalz, F.: *Canad. M.A.J.* 79:400 (Sept.) 1958. 14. Mullins, J. F., and Wilson, C. J.: *Texas J. Med.* 54:648 (Sept.) 1958. 15. Shelley, W. B.; Harun, J. S., and Pillsbury, D. M.: *J.A.M.A.* 167:959 (June 21) 1958. 16. DuBois, E. L.: *J.A.M.A.* 167:1590 (July 26) 1958. 17. McGavack, T. H.; Kao, K. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958. 18. Council on Drugs: *J.A.M.A.* 169:257 (January) 1959.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

The threat of the Forand Bill remains acute, and physicians are becoming more aware of the complexities involved in fighting it. They recognize the important role of prepaid voluntary insurance in this struggle, and they are showing an increased willingness to take a hand in politics in an effort to preserve free enterprise.

Meetings of our component societies have been held much as in the past, and there have been occasional scientific programs. The smaller counties frequently hold their medical society meetings in conjunction with the sessions of hospital staffs.

R. M. DAHLQUIST, M.D., *Councilor*

Deputy Councilors:

M. J. McGRANE, M.D., Chickasaw
P. R. V. HOMMEL, M.D., Clayton
A. F. GRANDINETTI, M.D., Fayette
E. V. AYERS, M.D., Floyd
P. A. NIERLING, M.D., Howard
T. E. BLONG, M.D., Mitchell
E. F. HAGEN, M.D., Winneshiek

SECOND DISTRICT

During the year, several of the larger counties of the Second District held regular meetings which included scientific programs.

The meetings of the Cerro Gordo County Medical Society were very well attended throughout the year. Several counties reported preschool examinations, and inoculation programs were carried out, for the most part in physicians' offices. Many physicians participated in community activities of various types.

On January 24, 1960, the caucus of the Second District was held in Belmond. Many problems confronting the medical profession were discussed. Dr. L. W. Swanson, of Mason City, was named to represent the Second District on the Nominating Committee of the State Medical Society.

JAY E. HOULAHAN, M.D., *Councilor*

Deputy Councilors:

F. F. McKEAN, M.D., Butler
H. G. MARINOS, M.D., Cerro Gordo
W. L. RANDALL, M.D., Franklin
T. J. IRISH, M.D., Hancock-Winnebago
I. T. SCHULTZ, M.D., Humboldt
M. G. BOURNE, M.D., Kossuth
CHARLES BERGEN, M.D., Worth
S. P. LEINBACH, M.D., Wright

THIRD DISTRICT

More than 700 years ago, Dante wrote: "The hottest places in Hell are reserved for those who, in a period of moral crisis, maintain their neutrality." Thus began a stirring article written by Carroll L. Witten, M.D., vice-speaker of the Congress of Delegates of the American Academy of General Practice. I may be quoting liberally from his thoughts in this report.

Of course the Third District is represented in most of the activities of the ISMS, and surely we have our county society officers, we have our county committees, and "you betcha" we attend regular meetings of our county societies and hospital staffs (for we have some fine hospitals up here in the Eskimo district, too). We even have some good Woman's Auxiliaries. All that has been mentioned in previous annual reports, and to me those reports have become extremely monotonous! A few of us from up here in the northwest corner of the state attended the political action meeting on November 8, in Des Moines. We saw very few new faces. The message, I believe, thus reached only those who could have spoken it.

As Dr. Witten said, "The time of a moral and national crisis has arisen. The medical profession is at the 'point of no return.' We must now stand up and be counted. We can no longer afford to be neutral." As we are counted, we must also scream like eagles. I mean every one of us, not just those who organize and attend the big meetings. And let's not just scream at each other! Let's be political actors! That means we must join other professional and businessmen in voicing our views and in taking action. And let's inform our patients (after all of *us* have been properly informed), while they consult us. We must sell ourselves, if we're being so improperly thought of, or we're going to *be sold, down the river*. Let's be honest, but let's be loud!

I know that there are many in the Third Councilor District (where general practitioners are very much in the majority) who *are* neutrals. Again, I quote Dr. Witten: "Just as there can be no compromise of integrity in our professional endeavors, neither can there be compromise of integrity in our philosophical position. Need we then have fear in facing up to unsound, harmful social and economic issues with a firm and well-founded, positive approach? It would appear that we have far greater to fear from the weakest in our midst than the strongest in our opposition. For, if American medicine is to discharge its self-assumed, ethically-demanded responsibility, we must neither fear nor fail to *stand up and be counted.*" I believe with Dr. Witten that we have travelled too far down the wrong road, having been propelled by appeasement, compromise and weak-kneed acceptance of third-party plans which we should have actively opposed and which we must now reverse, uproot and destroy. I am referring to programs that we have right here in the State of Iowa, and which we have been—and are being—forced to use since January, 1958. We've fallen into this predicament because fewer than *all* of us have stood up to be counted. In other words, there have been too many neutrals!

This report has been inspired by the feelings of doctors in my own county and by the feelings of the doctors who attended the caucus of delegates to select the Third District's member of the Nominating Committee. Those of the deputy councilors who could attend were also present at that meeting.

Also, as Dr. Witten said, "These are indeed days of unrest and uncertainty in medicine. These are days of changing socio-economic patterns, days of high taxes and high overhead, and especially days of running battles with those who would enter into the private practice of medicine by interfering between the doctor and the patient."

We have made a start, in the Third District, to do something about the position in which we find ourselves. When it is time for the next annual meeting, we hope to have accomplished:

1. More education of each individual doctor concerning the problems of his profession over and beyond the care of patients, through regular meetings of deputy councilors and others whom we hope to interest.

2. More active participation of individual doctors in local, state and national politics.

3. Studying and stimulating voluntary insurance business to keep government or other control away from all medical facilities—hospitals as well as doctors.

4. Watchful observation and analysis of all health and welfare programs on local, state and national levels which may attempt to assume responsibilities that belong to the individual.

We feel that in addition to the freedom of worship, the freedom of speech, the freedom from want and the freedom from fear, the democratic way of life should also include the freedom of choice. The philosophy of free choice touches on every phase of daily life, and not the least of it is the freedom to choose one's own physician, for the free choice of physician is an absolute essential in the provision of *good* medical care.

DEAN H. KING, M.D., *Councilor*

Deputy Councilors:

C. C. JONES, M.D., Clay
R. F. WOLCOTT, M.D., Dickinson
E. K. VAUBEL, M.D., Emmet
STUART COOK, M.D., Lyon
E. B. GETTY, M.D., O'Brien
F. B. O'LEARY, Osceola
H. L. BRERETON, M.D., Palo Alto
C. L. JONES, M.D., Pocahontas
M. O. LARSON, M.D., Sioux

FOURTH DISTRICT

The physicians of the Fourth District have shown a progressive interest in the activities of organized medicine.

County meetings have been held regularly.

Individual physicians are evidencing greater interest in the relationship of medicine to socio-economic problems.

Many thanks to many individuals, and especially the deputy councilors.

MARTIN BLACKSTONE, M.D., *Councilor*

Deputy Councilors:

R. R. HANSEN, Buena Vista
JAMES TIERNEY, M.D., Carroll
H. J. FISHMAN, M.D., Cherokee
R. A. HUBER, M.D., Crawford
J. B. DRESSLER, M.D., Ida
L. A. GAUKEL, M.D., Monona
R. J. FISCH, M.D., Plymouth
J. W. GAUGER, M.D., Sac
D. B. BLUME, M.D., Woodbury

FIFTH DISTRICT

All county societies of the Fifth Councilor District report a continuation of their usual activities, including regular scientific sessions. In addition, doctors have increased their participation in non-medical and paramedical activities in their communities, and have shown an increased interest in the political scene both at the local and state, and at the national level.

Only one district-wide meeting has been held during the past year, but representatives from all of the counties have been in attendance at the state level meetings. The attendance at the medico-legal meeting held in Fort Dodge was excellent, and there has developed considerable interest in meetings of this type.

Calhoun County reports a continuation of its scholarship program to promote students' interests in medical and allied careers.

The Greene County Medical Society has been engaged in the development of a geriatrics hospital. This movement is being started in cooperation with various civic and church groups. It is hoped that a solution can be found for the housing problems of the aged that will benefit not only those of modest means but also those who are comparatively well to do.

The membership of the Polk County Medical Society reached an all-time high of 385 during the year. That figure includes life, associate, non-resident and intern members as well as active ones. The operating budget of the Society was in excess of $35,000.

Among the things of chief concern to the Polk County Society during the year were the situation at Broadlawns Hospital, the Blue Shield controversy and the development of a program for the care of the aged. Efforts to maintain the standards of medical care at Broadlawns and to improve the teaching program there have been accelerated by the appointment of a Dean's Committee to facilitate cooperation between the S.U.I. College of Medicine and the Des Moines institution.

The Polk County Society's Committee on Aging, chairmanned by Dr. Wm. Morrissey, has worked diligently in studying the problem, in developing liaison between the Society and other responsible organizations, and preparing for the implementation of indicated services.

The examination of preschool children in Polk County was increased to a new high of 44 per cent by means of a program sponsored by the County Medical Society's Committee on Child Health. Another in the series of public forums, this one on the early detection of cancer, was held at KRNT Theatre at the conclusion of last year's ISMS Annual Meeting. As it had been previously, the Register and Tribune Company was a co-sponsor of that program. The Polk County Society's Mediation Committee processed six formal complaints against members—less than the average for recent years. Its Blood Bank Study Committee developed a program to extend the services of the present Polk County Blood Donor Service. The Society's members participated, generally, in the Vendor Payment Program, and its County Patient Committee has served loyally in helping administer that program. Its Commitment Board, Cancer Committee, Tuberculosis Committee, Committee on Legislation, and Committee on Public Health and Economics have all been active and alert to their responsibilities. The members responded well to excessive demands for support of United Community Services. The campaign to secure contributions from doctors was well-organized and under medical leadership.

The Polk County Society's Program Committee scheduled seven fine programs, including the annual combined meeting with the County Bar Association, and a combined meeting with the Central Iowa Veterinary Association. In addition, the Fall Party Committee planned and staged a very successful Halloween Hoedown.

For the first time, this year, the Polk County Society did something that county groups seldom attempt; it built a portable exhibit designed to tell the purpose and something about the activities of organized medicine at the local level to the public. The display was

first exhibited at the ISMS Annual Meeting last April.

The Polk County Society also contributed a generous award to the Hawkeye Science Fair, supported the Medical Assistants Association, and provided money prizes for the essay contest sponsored by the Auxiliary.

The medical profession in Polk County is especially proud and happy that Dr. William B. Chase, of Des Moines, was the recipient of the 1959 ISMS General Practitioner of the Year Award. It is thankful for the able help of its Woman's Auxiliary with projects such as providing new medical equipment for the Des Moines Health Center, sponsoring Future Nurses Clubs, helping with legislative contacts, and sponsoring an essay contest for high school students.

Through its full-time executive office and individual members, the Polk County Medical Society maintains excellent relations with many of the civic and social organizations of Des Moines. Its members have addressed many local groups during the year, and have helped in the instruction of practical nurses. Several of its members are serving in the interests of medicine on state and national levels. The Society has done some preliminary work for aggressive action against Forand-type legislation.

In closing, I wish to thank the deputy councilors of the Fifth District for their cooperation and assistance during the past year.

G. E. McFARLAND, JR., M.D., *Councilor*

Deputy Councilors:

RALPH L. WICKS, M.D., Boone
GLENN S. ROSE, M.D., Calhoun
ALLAN G. FELTER, M.D., Dallas
ELVIN D. THOMPSON, M.D., Greene
WILLIAM A. SEIDLER, JR., M.D., Guthrie
WILLIAM B. McGAHEY, M.D., Hamilton
JOHN G. THOMSEN, M.D., Polk
JOHN D. CONNER, M.D., Story
CHARLES J. BAKER, M.D., Webster

SIXTH DISTRICT

All county medical societies in the Sixth Councilor District have held regular meetings throughout the year. In the main, these have been strictly scientific in nature, although several of the counties have devoted one meeting to a buffet dinner with the wives.

The Tama County Society held a joint meeting with the Tama County Bar Association at which both the doctors and the lawyers' wives were present. On that occasion, the film sponsored jointly by the AMA and the ABA entitled "The Man Who Didn't Walk" was shown.

There is considerable hospital building underway in the Sixth Councilor District. Mercy Hospital at Marshalltown has just completed a successful fund-raising campaign for a new $850,000 addition. Construction will begin in the near future. The enlarged structure will include a psychiatric unit as well as other additional facilities. The Evangelical Hospital at Marshalltown is also formulating plans for an addition.

Schoitz Memorial Hospital, in Waterloo, will soon move into a new 80-bed addition. This will include a modern recovery room and one additional major operating room. Facilities for the eventual installation of a cobalt deep-therapy unit have also been included. Allen Memorial Hospital, in the past year, has opened a 75-bed convalescent home that is filling a need which has been present in the community for some time. In addition, Allen Memorial will soon open a new 35-bed psychiatric unit which will include facilities for both open- and closed-ward therapy.

The highlight of 1959 in Black Hawk County was the completion of the Rourk Report (the Industry-Hospital Insurance utilization audit) which was of inestimable value to the medical profession and industry alike.

Several of the counties have active medical Auxiliaries. The Auxiliary in Black Hawk County has been especially active, having monthly meetings each with a planned program. The organization's present project is the sponsorship of a dinner dance named "The Medicine Ball." In addition to dancing, a skit will be presented, the participants being members of the County Medical Society. The proceeds from this project will go to help support the Mental Health Clinic.

CECIL W. SEIBERT, M.D., *Councilor*

Deputy Councilors:

N. C. KNOSP, M.D., Benton
C. D. ELLYSON, M.D., Black Hawk
A. E. REEDHOLM, M.D., Grundy
L. F. PARKER, M.D., Hardin
C. F. WATTS, M.D., Iowa
J. W. FERGUSON, M.D., Jasper
R. C. CARPENTER, M.D., Marshall
S. D. PORTER, M.D., Poweshiek
A. J. HAVLIK, M.D., Tama

SEVENTH DISTRICT

Throughout the past year, the counties of the Seventh Councilor District have generally had monthly meetings, mostly scientific, except during the months of July, August and September.

Some of the counties with small physician populations meet less frequently and usually combine their medical society meetings with the gatherings of their hospital staffs.

Many of the societies have been active, as usual, with special projects such as student-nurse recruitment, support of the handicapped, free physical examinations for high school athletes, etc.

Throughout the District, there has been active opposition to the Forand Bill or similar legislation, and physicians have written their protests to their congressmen and to the members of the House Ways and Means Committee. Also, non-medical organizations are being informed on this issue, so that they too may voice their protests.

I wish to extend my personal thanks to the deputy councilors, who are serving so well in keeping their colleagues informed and who are taking time from their practices to perform additional duties.

We of the Seventh District keenly feel the loss, by death, of Dr. Tom M. Redmond, of Monticello, formerly the deputy councilor in Jones County. He was a good worker, as well as a fine physician and gentleman.

C. E. RADCLIFFE, M.D., *Councilor*

Deputy Councilors:

P. J. LEEHEY, M.D., Buchanan
H. E. O'NEAL, M.D., Cedar
V. W. PETERSEN, M.D., Clinton
R. E. CLARK, M.D., Delaware

D. F. WARD, M.D., Dubuque
L. B. WILLIAMS, M.D., Jackson
L. H. JACQUES, M.D., Johnson
L. D. CARAWAY, M.D., Jones
H. J. JONES, M.D., Linn

EIGHTH DISTRICT

The county medical societies in the Eighth Councilor District have held regular meetings throughout the year, having scientific programs at all meetings.

No particular programs have been instituted in any community, but polio programs were completed in all areas. All counties have expressed their disapprobation of the vendor payment program, and Des Moines County doctors are still not participating.

There have been many additions to our ranks, and all of the new men, besides working hard at the routine practice of medicine, have concerned themselves with the economics and politics of medicine. Their willingness to do these additional sorts of work is greatly to their credit.

J. H. SUNDERBRUCH, M.D., *Councilor*

Deputy Councilors:

J. F. Foss, M.D., Des Moines
J. S. JACKSON, M.D., Henry
J. W. CASTELL, M.D., Jefferson
G. H. ASHLINE, M.D., Lee
G. C. MCGINNIS, M.D., Lee
E. S. GROBEN, M.D., Louisa
K. E. WILCOX, M.D., Muscatine
ERLING LARSON, M.D., Scott
KIYOSHI FUROMOTO, M.D., VanBuren
G. E. MONTGOMERY, M.D., Washington

NINTH DISTRICT

The councilor of the Ninth District takes this opportunity to thank the deputy councilors for their cooperation during the past year.

The Appanoose County Medical Society held regular meetings during 1959. Its public school health program was continued.

The Davis County Medical Society held regular monthly meetings during the year. Among the group's activities were physical examinations for all athletes in the local high school, and annual physical examinations for all 4-H boys and girls.

The Keokuk County Medical Society had its annual meeting in January, 1959, for the election of officers.

The Mahaska County Medical Society had 10 regular meetings in 1959. The doctors cooperated with the Cancer Society, the TB and Heart Associations, and Crippled Children's Clinics. The Woman's Auxiliary was very active, and assisted in many projects. Doctors' Day was observed on March 30, and there was appropriate newspaper and radio coverage.

The Marion County Medical Society held quarterly meetings during 1959. Members of the Society participated in the vaccination and immunization program.

The Monroe County Medical Society had no special projects during the year.

Throughout 1959, the Wapello County Medical Society held its regular meetings, which included scientific programs.

The Wayne County Medical Society held nine scientific meetings during 1959.

GEORGE S. ATKINSON. M.D., *Councilor*

Deputy Councilors:

E. A. LARSEN, M.D., Appanoose
H. J. GILFILLAN, M.D., Davis
R. G. GILLET, M.D., Keokuk
A. L. YOCOM, M.D., Lucas
R. L. ALBERTI, M.D., Mahaska
DEXTER HAKE, M.D., Marion
D. N. ORELUP, M.D., Monroe
L. J. GUGLE, M.D., Wapello
D. R. INGRAHAM, M.D., Wayne

TENTH DISTRICT

As usual, the county medical society meetings in the Tenth District were usually held in conjunction with hospital staff meetings, and for the most part these were monthly sessions.

For the last year, the big and burning questions here, as well as throughout the rest of the state, have been what to do about polio, what to do about encroachment upon the practice of medicine by the federal government in its various forms, or by the so-called "doctors' plan" Blue Shield.

On the latter item, there were bitter opponents to the plan, and some who even feel that probably the encroachment was justified.

Almost throughout the area, the so-called Welfare Plan that was accepted last year by the Executive Council of the Medical Society and later by the House of Delegates, first in special session and then again in regular session, encountered bitter opposition from almost every group in this Councilor District. It was to have been reevaluated this February.

Nearly to a man, the physicians in this Councilor District are against any encroachment by the federal government into the field of medicine in whatever guise.

Nearly universally, the physicians of our area are somewhat bewildered by "our" Medical Society's stands on these various issues, some of which seem to them diametrically opposed to the stands taken on the others.

All in all, we've added a few physicians to our ranks during the past year, and lost about as many. This year has been about average for the physician.

HAROLD J. PEGGS, M.D., *Councilor*

Deputy Councilors:

A. J. GANTZ, M.D., Adair
J. C. NOLAN, Adams
G. B. BRISTOW, M.D., Clarke
E. E. GAMET, M.D., Decatur
J. E. EVANS, M.D., Madison
?..... ?....., Ringgold
R. W. BOULDEN, M.D., Taylor
H. J. PEGGS, M.D., Union
C. A. TRUEBLOOD, M.D., Warren

ELEVENTH DISTRICT

The medical societies in Pottawattamie, Montgomery and Page Counties held regular monthly meetings, and they were well attended. Audubon, Shelby and Harrison County meetings are usually held in conjunction with meetings of the hospital staffs. Shelby County holds monthly staff conferences at which there are speakers, and has four additional medical society sessions.

The Pottawattamie County Medical Society again

held its annual Iowa-Nebraska Clinical Assembly, which was well attended. The Page County Medical Society sponsored a one-day medical program that was attended by physicians from southwest Iowa, southeast Nebraska and northwest Missouri.

The Red Cross Blood Bank has been functioning through the area, in cooperation with the medical societies.

The Auxiliaries in Page, Pottawattamie, Cass, Montgomery and Shelby Counties meet regularly and carry on active programs.

The cooperation and work of the deputy councilors this past year have been greatly appreciated.

L. V. LARSEN, M.D., *Councilor*

Deputy Councilors:

HAROLD K. MERSELIS, M.D., Audubon
EINER M. JUEL, M.D., Cass
K. D. RODABAUGH, M.D., Fremont
A. C. BERGSTROM, M.D., Harrison
M. L. SCHEFFEL, M.D., Mills
H. C. BASTRON, M.D., Montgomery
KENNETH J. GEE, M.D., Page
GEORGE H. PESTER, M.D., Pottawattamie
J. H. SPEARING, M.D., Shelby

Reports of Standing Committees

COMMITTEE ON LEGISLATION

This report, written in February, more than two months before the April 24-27 Annual Meeting, will be incomplete because of the current crisis on Forand-type legislation. Obviously, a supplementary report will be necessary at the time of the Annual Meeting.

FORAND-TYPE PROPOSALS AND OTHER SCHEMES FOR EXPANDING SOCIAL SECURITY

As predicted for this highly political year of 1960, the AFL-CIO and its sympathizers among the "liberals" and "progressives" in Congress launched, in mid-January, a nationwide offensive for passage of Forand-type legislation this year. Short of World War III, it is unlikely that Congress will meet in full session again after its June adjournment for the party conventions and the subsequent election campaigns. Thus, even as this is written, the few weeks between now and June leave little time for action on the part of all those who believe in the private-enterprise system, and particularly in the private practice of medicine.

Besides the Forand Bill (H.R. 4700), there are now about 400 bills pending in Congress, each of which would broaden Social Security in one way or another! Many of them are Forand-type legislation. Take, for example, Senator Kennedy's bill (S.F. 2915), which would provide "*only*" *for hospitalization*, nursing home care and service, home nursing, and diagnostic outpatient service, for Social Security recepients over age 65 and others. It differs from the Forand Bill chiefly in that it would not provide surgery and inpatient medical care. It was introduced on January 26, 1960, by Kennedy and Senator Hart (D., Mich.) in the hope that it would lull the doctors and others into a feeling of complacency and non-activity. The bill was immediately referred to the Senate Finance Committee, where it now rests—not quietly—either to be voted out onto the floor or to be attached *in toto* to some type of Social Security proposal that has been voted out of the House Ways and Means Committee.

There are several bills to eliminate the age-50 requirement and the waiting periods for cash benefits for the disabled. The AMA and your State Society are even more opposed to such negative legislation than they were when the initial bill (H.R. 7225) was passed two years ago by one vote and signed into law by Mr. Eisenhower. But the principle and precedent was firmly established, and now the proponents are demanding, with logic, that if a person at *any* age becomes disabled, he should be entitled to draw Social Security benefits. The chances of success in our opposition to proposals of this type are, perhaps, less than 50-50.

As outlined above, it is obvious that there is a tremendous danger in proposing legislative substitutes or compromises as alternatives for Forand-type legislation. It would publicly announce that our opponents can get through our first and really our only line of defense, and that some legislation of this type is a certainty—watered-down though it might be by the time it got through Congress. *And when any sort of Forand-type legislation became law, it would firmly establish the principle and precedent for national compulsory "health insurance," i.e., socialized medicine, through Social Security!*

If this principle and precedent is established, the proponents of socialized medicine and the welfare state will have won a shattering victory, and the personal, political and economic freedom of all those who believe in a private-enterprise system and the supremacy of the individual will have suffered a crushing blow.

As you know, Mr. Gerald L. Buckles, our coordinator of field services and the staff secretary to the Committee on Legislation, was relieved of all committee responsibilities on January 1, at the request of the AMA, so that he might devote half of his time to field work in Iowa and Minnesota in opposition to the Forand Bill. The other portion of his time, he spends in Iowa, again primarily in the field, on his usual varied assignments for the ISMS. At the moment, he is covering as much ground as possible in both Iowa and Minnesota. Mr. Julian Serrill is now acting as staff secretary for the Committee on Legislation.

Your Committee and the officers of ISMS, most certainly including the councilors, and others such as the members of the Woman's Auxiliary have been distributing bulletins and disseminating information to all key persons in every county medical society. All physicians have been sent information as to the urgency of the situation and the need for *immediate action* at the local level in a massive campaign to win this major and decisive battle.

As of now, no one can predict what the situation will be at the time this report is offered for the approval of the House of Delegates. The immediate crisis may or may not be over, but in any event it is certain there will be more crises concerning Forand-type legislation in the future. Winning this present battle may require even greater effort on our part next year, if we are to convince the participants in the January, 1961, White House Conference on Aging that the elderly can be better cared for outside bureaucratic medicine. However, losing this present battle would leave only the problem of *how* government medicine is to be imposed upon our profession, rather than *whether*. Whatever is done *now* in winning friends and influencing people at

all levels—especially at the local level where good or bad lawmakers will be elected in November—will determine not only victory or defeat for Forand-type legislation and government medicine, but the ultimate victory or defeat of the private-enterprise system as a whole.

Your Committee will not repeat the list of events that have occurred in the past few months and will not review in detail the efforts of the AMA and your State Society to stimulate a positive community program of action at the local level on the real (as well as the political) problems of the aged. This was done on November 8, at the ISMS Special Conference on Legislation. That program stressed the fact that physicians *must* have the help of thousands of allies, if they are to win. Reports of that conference and requests for action were sent to every physician in the state. Key people in each society, both physicians and Auxiliary members, were sent special material and information. In addition, the 147 men and women who attended the meeting returned to their respective committees and disseminated the information that had been given them there.

The chairman and the co-chairman of the Committee had the honor of appearing before the House Ways and Means Committee during its five-day hearing on the Forand Bill. Dr. Earl C. Lowry, president of Iowa Blue Shield, also appeared there and distinguished himself and his profession by giving positive factual testimony as to the accomplishments of Blue Shield and Iowa doctors. Likewise, the president of the Iowa Pharmaceutical Association had an opportunity to give five minutes of effective testimony. Other Iowa groups were asked to write letters of opposition, and several bulletins were sent to the ISMS membership on this matter.

OTHER NATIONAL LEGISLATION

Smathers-Keogh Bill. At this writing, it is hoped that this legislation granting to the self-employed a tax status similar to that enjoyed by corporation employees and permitting them to defer income tax payments on earnings placed in private retirement plans will have received favorable consideration by the Senate. The bill passed the house in 1959, but to date no conclusive action has been taken on it by the Senate. The Administration and the Treasury Department continue to have doubts about the Bill and its effect on revenue. The AMA and the ISMS, as well as many other groups representing self-employed persons, have supported and are supporting this proposal.

Aid to Medical Schools. Several bills designed to provide federal aid to medical schools and education in general are in the hopper. Concerning federal aid to medical schools, it should be said that the AMA has not opposed the "brick and mortar" grants, but is definitely opposed to the appropriation of funds to meet the colleges' ordinary operating expenses. Whether or not such bills will pass may be foreshadowed by the final action that Congress takes on bills for federal aid to education in general, including teachers' salaries. As of now, a bill for aid to education, including salaries, has passed the Senate and is awaiting action by the House.

Medicare. As announced in ISMS bulletins sent to all members, the cuts in funds for this program have been restored, and the restrictions inserted into the original legislation have been largely eliminated.

Nursing Home Loan Guarantees. In 1959, Congress passed a bill carrying authority for guarantees of nursing home mortgages, a proposal supported by the AMA and the American Nursing Home Association.

ISMS-AMA Liaison. Cooperation between the AMA Council on Legislative Activities, Legislative Key Men in the six north-central states, and our own ISMS Committee on Legislation has been excellent this past year. Members of your Committee attended a national medical conference on legislation in St. Louis in October, and out of it came our own Special Conference on Legislation in November. The exchange of ideas and the pooling of experiences that come from this three-way liaison must certainly add greatly to the effectiveness of our efforts.

STATE LEGISLATION

As is well known by now, through legislation and ISMS News Bulletins, the 58th General Assembly of Iowa passed H.F. 260, the County Medical Examiner Bill. This was the key proposal supported by the Society, and since its passage the medical examiner system has replaced the archiac coroner arrangement. The post of medical examiner is appointive, and also the duties of the official are more medical than judicial. Thus, it is mandatory that either a doctor of medicine or an osteopath be appointed in each county.

A special ISMS Subcommittee on the Medical Examiner Law was appointed soon after the Legislature adjourned, and it has been active in disseminating information about the law and its implications to all counties. A local physician has been designated in each county, at the request of the Subcommittee, to receive this information and pass it on to his county society, and to make sure that it submits the names of two or more physician nominees to the county board of supervisors prior to January 2, 1961, as required by law.

Your Committee would like to point out, again, the obvious public service implications of our participation in this improved system, and would like to call attention to the fact that legislators—even those who voted for the Bill—will be watching closely to see how readily and completely we fulfill our pledges of full cooperation and compliance.

Several hospital bills were passed; some 12 mental health proposals were enacted into law; and other positive actions of medical interest were taken by the Legislature and supported by the Society. Again, these have been detailed in ISMS Legislative Bulletins.

The bill for the expansion of the Board of Health, supported by the ISMS in cooperation with the Iowa Interprofessional Association, failed, but enough headway was gained to indicate possible future passage of this legislation. As is well known, chiropractors sought to obtain board membership, and the IIA opposed them.

Senate File 44, a bill to make federal funds available to Iowa residents who are disabled, was passed after a prolonged debate, but the amount of money to be obtained on a matching basis from the federal government was sharply reduced.

In addition, a joint Senate-House committee to study the entire welfare program in Iowa was established as an "interim committee" as a result of the passage of a joint resolution. The report of this committee is to be made available to the Legislature in 1961.

OTHER MATTERS

A summary of the November 8 ISMS Special Conference on Legislation was mailed to the membership

some time ago, and it has already been mentioned earlier in this handbook report. However, it is important that we refer to it once more. The speakers at that meeting emphasized the need for long-range political action by doctors at the local level as individual citizens working in cooperation with other community leaders. Only in this way can the battle for private enterprise and individual political and economic freedom be won and those freedoms maintained. The Iowa Physicians' Political League, a group composed of doctors from both political parties and separate from the ISMS, was formed in November. This group has been very active in encouraging physicians to give their personal and financial support to candidates who desire to preserve private enterprise and provide good government for all. It is the Committee's understanding that the League will intensify its activities in the months ahead.

Your Committee should like to commend the members of the League for the interest they are taking in politics, and likewise to commend all other citizen-politicians who devote their time and money to the preservation of the American way of life, through the parties of their choice.

It must be restated time and again that those of us who believe in our republic as it was intended to stand —those of us who truly believe in individual freedom —must exert our efforts at the local level, where *lawmakers* good or bad are chosen, rather than in Congress and in the Legislature where the *laws* are made.

As chairman of the ISMS Committee on Legislation, I wish most sincerely to thank the officers of the Society, my co-chairman and the committee members for their hard work and cooperative effort on your behalf in planning the programs and carrying out the policies of the Society in legislative matters. On behalf of the Committee, the chairman wishes to acknowledge the fine work done by the Society's legal counsel, Mr. Robert B. Throckmorton, and members of the ISMS staff, and to thank them for it.

This has been a year in which the efforts of the local physicians have been outstanding, and it is they who will make a success of any effort initiated by your Committee.

NOBLE W. IRVING, M.D., *Chairman*

SUBCOMMITTEE ON COUNTY MEDICAL EXAMINER LAW

The president of each county society was requested to designate a member to whom information concerning provisions of the new law could be sent.

The chairman met with representatives of the State Department of Health, Department of Public Safety, and Attorney General to discuss certain aspects of the new law requiring clarification.

It is intended that an informational booklet will be prepared outlining responsibilities of the medical examiner and containing general recommendations for implementation of the new law.

The Subcommittee is anxious that the Iowa State Medical Society and its membership be fully informed, so that through cooperation it can fulfill its own predictions made when advocating passage of the law.

T. E. CORCORAN, M.D., *Chairman*

NECROLOGY COMMITTEE

The following members of the Iowa State Medical Society died during 1959:

	Age
Emma M. Ackerman, Sioux City	74
Albert E. Ady, West Liberty	63
Eerko S. Aeilts, Sibley	70
George C. Albright, Iowa City	77
Charles H. Bartruff, Reinbeck	71
James Christiansen, Sioux City	88
Lonnie A. Coffin, Farmington	69
Charles H. Cords, Rudd	66
Daniel F. Crowley, Des Moines	81
Jay R. Dewey, Schaller	68
Raymond J. Duling, Sioux City	62
Charles W. Ellyson, Waterloo	81
Roger R. Flickinger, Mason City	58
George R. Gould, Grundy Center	72
D. Dale Harris, Marshalltown	42
Roy A. Hulse, Burlington	48
Samuel Kline, Sioux City	76
Edwin A. Nash, Des Moines	84
Paul O. Nelson, Emmetsburg	65
Robert J. Nelson, Clinton	62
George F. Niblock, Homewood, Ill.	87
Carl A. Noe, Cedar Rapids	54
Charles F. Noe, Amana	82
Frank R. North, Winfield	55
Archibald F. O'Donoghue, Sioux City	63
John N. Patterson, Burlington	94
David T. Rambo, Ottumwa	86
John H. Randall, Iowa City	60
Harry E. Ransom, Des Moines	73
Elmer J. Raw, Pierson	85
Thomas M. Redmond, Monticello	81
Frank M. Rizzo, Sibley	49
James B. Robb, College Park, Maryland	83
Harry L. Rowat, Des Moines	80
E. Thomas Scales, Des Moines	58
Joseph H. Schrup, Dubuque	76
Arthur Steindler, Iowa City	81
Clifford W. Thomas, Mason City	57
George E. Turner, Des Moines	77
William R. Turner, Fort Dodge	75
Rudolph A. Vorpahl, Cedar Rapids	76
George R. Woodhouse, Vinton	76

MEDICOLEGAL COMMITTEE

The Medicolegal Committee has held two meetings this past year, and plans have been made for another to be held prior to the ISMS Annual Meeting.

The Marion County Resolution on Anti-Nuisance Suits was referred to this Committee for study by the 1959 House of Delegates. The Committee has devoted a great deal of thought and research to this subject, and is continuing to do so. A representative from Marion County was asked to attend our January 27 meeting to discuss this Resolution, but because of illness was unable to be there. The Committee feels that any final recommendation should be postponed until after it has heard from the Marion County representative. A supplemental report will be presented to the 1960 House of Delegates.

The Committee endeavored to make a survey of malpractice suits in the State of Iowa. All county medical societies and seven insurance companies writing this

type of coverage were asked for information, but little was accomplished, for an insufficient number of counties replied and many insurance companies were reluctant or unable to provide this type of data.

Additional material was referred to this Committee in regard to malpractice screening panels. The Medicolegal Committee is now in the process of reviewing and studying it. At the present time, the Committee feels it should go slowly in recommending the adoption of a malpractice screening panel. Rather, it wants to wait and see how these panels work out in other sections of the country, and whether there is actually a need for one in this state.

Some time ago, the Committee questioned various state medical societies about their methods of handling malpractice situations. The technics varied considerably, and thus it is impractical for the Committee to recommend one single procedure without further study. Numerous pamphlets and reports from these states are on hand, and the Committee will be glad to make this material available upon request. Anyone who wishes to examine it may ask either the ISMS headquarters office or this Committee.

As charged by the Articles of Incorporation and By-Laws of the Iowa State Medical Society, your Medicolegal Committee remains ever ready to assist and advise member physicians in medicolegal matters.

VAN C. ROBINSON, M.D., *Chairman*

COMMITTEE ON ARTICLES OF INCORPORATION AND BY-LAWS

The Committee is considering amendments to the Articles of Incorporation and By-Laws which it plans to present to the House of Delegates, but as this report is written, it has not had an opportunity to approve these proposals.

P. F. CHESNUT, M.D., *Chairman*

COMMITTEE ON MEDICAL SERVICE

The Committee on Medical Service has been given its "responsibility pill" for the year 1959-1960, and has attempted to digest it. At this writing, no undesirable side-effects have been noted, but there may yet be a delayed unfavorable reaction.

The Committee as a whole met on October 7, 1959, at the ISMS headquarters to review what had been done by the various subcommittees and to plot future courses. The chairman reported on the Minneapolis Conference on Federal Medical Services and the session on Veterans' Medical Care that he had attended. Those in attendance at that meeting in Minneapolis had been asked, on returning to their respective state medical societies, to have their colleagues make a final selection of the basic method of participation that they, as a society, want to follow in the program. Following considerable discussion at the October 7 meeting in Des Moines, the Committee forwarded the following motion to the ISMS Executive Council: "That we as a Society remain on our present basis" (designated individual physicians), unless in the opinion of the Council a survey of the membership should be made. The chairman of the Committee presented this motion in person at the next Council meeting, and the Council voted to retain the present basis. Dr. R. C. Gutch will elaborate on this matter in his report.

The Committee on Medical Service considered in detail the relationship of the Iowa State Medical Society to the Health Insurance Council. Dr. George Young very carefully reviewed the history of the ISMS standard claim form and the comparable form devised by the Health Insurance Council, and after lengthy discussion it was moved that the Committee go on record as recommending that physicians complete either the ISMS or the Health Insurance Council standard claim form at no charge. However, in instances where more detailed information is required and where it is necessary for the physician to complete a more complicated form, the fee charged should be left to the discretion of the physician. The chairman brought this motion also to the attention of the Executive Council, and that body approved it.

Dr. Issac Sternhill's Subcommittee on Medical Service to the Indigent had met on two occasions with representatives of the Department of Social Welfare, and the reports of those meetings were studied. It was thought that, in the interests of Medical Society unity, certain recommendations as to fees for radiology and pathology be deferred until further documental study could be made. Dr. Sternhill will report.

The possibility of publishing a revised edition of the HANDBOOK OF RESOURCES AVAILABLE TO PHYSICIANS was again considered. Dr. Sternagel agreed to canvass the Iowa Association of Medical Assistants to find out how many of the members of that organization had seen it, read it and thought it useful. The vote of the Committee was 3-2 against publishing a new edition.

Dr. W. L. Downing's Subcommittee on Hospital and Professional Relations, no doubt, will be further guided by the principles that the AMA reaffirmed at its recent meeting in Dallas and which have been published under the title "Guide for Conduct of Physicians in Relationship With Institutions."

The restoration of certain types of service to the Medicare program will be brought to the attention of all Iowa physicians. Needless to say, we are gaining ground.

After this brief review of the Committee's efforts at digesting its "responsibility pill," it should be evident to the members of the Society that nothing can ever substitute for the obligation resting on each individual to exercise his own free will. We of the Committee on Medical Service (I hope) are convinced that no pill can ever be found to replace "free choice."

I want to take this opportunity to thank the members of my Committee and its subcommittees for making mine a most pleasant task.

C. H. STARK, M.D., *Chairman*

SUBCOMMITTEE ON MEDICAL SERVICE TO THE INDIGENT

With the start of the calendar year 1959, the Vendor Payment Program came into full force and effect. As a preface, it should be mentioned that the ISMS Subcommittee on Medical Service to the Indigent met with officials of the State Department of Social Welfare in September, 1958, and were apprized of the provisions of the plan proposed for the use of supplementary federal funds in paying the vendors for medical services to the indigents of our state. The ISMS, through this Subcommittee, was requested to implement the program by submitting a fee schedule for the limited service to be provided under this plan, and to furnish supervisory personnel at the county level.

The Subcommittee was instantly aware that this program would go into effect either with or without the

approval of the State Medical Society. It was equally cognizant that through cooperating with the State Board of Social Welfare in the supervision of the program, organized medicine could mitigate, if not altogether hold off, the onus of government interference in the practice of medicine. The Subcommittee made the acceptance of certain principles a condition for its approval of the scheme. Among these principles were the well established policies of our Society (1) that payments must be made to the physician rendering the service, and (2) that the free choice of physician must remain the inviolable right of each patient.

Accordingly, this Subcommittee appeared before the ISMS Executive Council in November, 1958, and recommended adoption of the program. After considerable debate and discussion, the Council accepted the recommendation of the Subcommittee.

The membership of our Society, through a circular letter, was informed of this action, and before its effective date and without the knowledge that this program of aid was to be made available either with or without the approval of our Society, many individual members and several county medical societies flooded the headquarters office, the ISMS officers and the members of this Subcommittee with objections to it.

In consequence, the president of our Society called a special meeting of the House of Delegates at Des Moines on February 22, 1959. Among the other matters presented to that body for consideration was the Vendor Payment Program. After considerable discussion, most of it in the form of objections, the Reference Committee of the House of Delegates to which this matter had been given recommended approval and acceptance of the vendor payment program with reservations and on a trial basis, but the House voted "to temporarily tolerate but disapprove" the program.

Early in the year, the ISMS Executive Council directed this Subcommittee to explore certain phases of the vendor program. Among the things it was asked to do was to renegotiate fees for special services such as radiology and pathology, and payment for drugs when dispensed by physicians, and to explore the feasibility of having payments disbursed at the county level.

The Subcommittee met with officials of the State Board of Social Welfare and members of the ISMS staff for the express purpose of pursuing the objectives assigned it by the Council and discussing such other matters as might seem pertinent.

The subject of fees for radiology and pathology performed in doctors' offices was discussed at length. It had originally been the practice of the Board of Social Welfare to pay for pathology and radiology services at the same rate (i.e., maximum $3 per unit), whether those services were performed in the hospitals or in doctors' offices. But because of the problem of pathologists and radiologists who work under individual agreements with their hospitals, a concession was made under which pathology and radiology services performed in a hospital were paid for in accordance with the individual doctor-hospital agreement.

The problem was temporarily resolved by the issuance of a recommendation that those affected should submit evidence of cost differential so that further consideration might be given to their claims.

The matter of fees for the dispensing physician was the subject of lengthy conversations at many meetings between the Subcommittee and the State Board of Social Welfare. The Subcommittee first proposed that the dispensing physician who engages in this dispensing activity more by necessity than by choice should be paid on the same basis as the pharmacists—namely, 10 per cent below the retail charge. The State Board of Social Welfare proposed, instead, to pay him 10 per cent above cost. The Subcommittee countered with the proposal that the dispensing physician be permitted at least a 20 per cent mark-up. It was agreed that a pilot study of all the elements entering into the costs of their dispensing be undertaken by certain of the physicians who are providing such service, and that they submit reports that the Subcommittee and the Board of Social Welfare can use in reevaluating that phase of their work. As this report is being written, the study is in process.

The proposal that vendor payments be made by units at the county level was submitted to the State Board of Social Welfare. The Subcommittee was informed that since the Board is the fiscal agent of the federal government in respect to funds allocated to this program, only the Board can dispense payments to the vendors. In this connection, the Subcommittee was reminded that since approval of all bills submitted for payment by the Board of Social Welfare must have been given by a county checking committee, a degree of local control is preserved.

In July, 1959, the Subcommittee, augmented by members of the ISMS staff, met with officials of the State Board of Social Welfare. By that time, both groups had had an opportunity to appraise the vendor payment program during six months of operation. They agreed that there were fewer general problems than had been anticipated.

The first and most general problem had arisen from the monthly authorization form. The State Board of Social Welfare agreed to issue blanket orders, through the offices of county welfare directors, that would remain in effect as long as the recipient clients continued eligible for assistance.

The problem of the individual physician who fails to abide by the letter of the regulations and the intent of the program was discussed. The Subcommittee recommended that those cases that cannot be resolved by the local county checking committee be referred to an appropriate group of the State Medical Society which has machinery to handle such cases.

Of the many resolutions, queries and other items that had been referred to this Subcommittee for study, only those which had general application were discussed. Among them were the matter of intensive care, the fee for care by a specialist, and the added services above those generally regarded as routine in an office or house call. It was agreed by the State Board that such fees would be allowed if approved by the local checking committee and if a letter or note of explanation from the attending physician were appended to the billing form.

The final meeting of the Subcommittee with the Board of Social Welfare was held in Des Moines on December 10, 1959. On that occasion there was general discussion of the background and purposes of the newly announced care-cost evaluation program. This deals with the need for physician cooperation in evaluating the degree of custodial or nursing-home care needed by individual patients. Although a storm of protests arose from many sections of the state, and the Subcommittee was deluged with condemnatory

resolutions because doctors had been given an additional "form" to fill out, the fact remains that only the attending physician is qualified to determine the care that his patient needs. The Board was willing to pay the cost of a call if by that means it might determine more realistically the pay allowance for care of a nursing-home patient.

In conclusion, it can be said that the Subcommittee and the ISMS membership generally have survived one year of a program that was entered into only with the gravest reservations, and viewed with dismay and doubt, but carried forward with the good will and altruism that are so characteristic of our profession. To this end, the doctor will continue to treat his patients with skill and meticulous care, forms and programs notwithstanding.

Finally, it needs be said that the Subcommittee will continue vigilant, so that the general aspects of the practice of medicine within the framework of free enterprise may be preserved.

The chairman acknowledges with deep gratitude the assistance of the members of the Subcommittee and the staff members of our Society.

ISAAC STERNHILL, M.D., *Chairman*

SUBCOMMITTEE ON PREPAYMENT MEDICAL CARE

The functions of the Subcommittee on Prepayment Medical Care during the past year have been as follows:

1. It recommended to the Committee on Medical Service that fees for completing other than standard ISMS or Health Insurance Council claim forms be left to the discretion of each physician.

2. It worked with the Health Insurance Council in solving local, individual problems involving relationships between doctors and insurance companies.

3. It participated in the Regional Conference of Committees on Insurance and Prepayment Plans, held in Minneapolis November 20-21, 1959. This was an open-forum exchange of ideas and problems for representatives of medical societies in the Midwest states, and it dealt with the demands of labor unions, health insurance programs, plans approved by medical societies, and problems of the aged.

4. It is formulating plans for intensifying liaison between the ISMS and the Health Insurance Council.

GEORGE G. YOUNG, M.D., *Chairman*

SUBCOMMITTEE ON VETERANS' AFFAIRS

At the meeting of the Committee on Medical Service, October 7, 1959, the following three basic methods were presented for participation in the VA program:

1. *Designated Physicians.* When this method is utilized, the VA regional office contracts with *individual* physicians in a state directly, and the state medical society takes no formal part in the program.

2. *Direct Agreement.* By this method, the state medical society negotiates an informal agreement with the VA regional office.

3. *Intermediary Agreement.* In this type of plan, the state medical society, through a "third party" agency (such as Blue Shield), not only takes part in negotiating fee schedules but also participates in the actual administration of the program.

At present, Iowa doctors are participating on an individual basis.

Following considerable further discussion, the following motion was made, seconded and carried: "Regarding the Veterans Hometown Care Program, the Committee on Medical Service recommends to the Executive Council that the program be left in Iowa on its present basis (designated individual physician) unless it is the opinion of the Executive Council that a survey of the membership, stressing the public relations aspects of the problem of care for these disabled veterans, should be made to determine the opinions of the membership regarding these three different methods of participation."

The ISMS NEWS BULLETIN of December 9, 1959, reported on the discussion of Veterans' Affairs at the AMA Dallas meeting as follows:

"Recognizing the fact that the majority of Veterans Administration hospital admissions are for non-service connected cases, the AMA House registered a strong protest to the VA, and urged stricter screening of non-service connected disability patients to government hospitals. It also concurred with a AMA reference committee's suggestions that all state medical associations (1) assist actively in obtaining medical care for those veterans with financially catastrophic disabilities, (2) help veteran patients determine the probable cost of care so that they may more accurately judge their ability to pay, considering the extent of their insurance coverage, (3) establish liaison with VA hospitals to assist in estimating the cost of private care in order to facilitate the admission of such catastrophic cases, and (4) take such steps as are advisable locally to assist veterans and their organizations in assuring that this care is provided for those who need it most."

R. C. GUTCH, M.D., *Chairman*

SUBCOMMITTEE ON HOSPITAL AND PROFESSIONAL RELATIONS

To date, no meetings of the Subcommittee on Hospital and Professional Relations have been held.

WENDELL L. DOWNING, M.D., *Chairman*

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The Committee on Medical Education and Hospitals cooperated with the Pottawattamie County Medical Society in sponsoring a postgraduate medical education program in Council Bluffs on October 15, 1959. Physicians from 18 counties were invited to attend, and 55 of them registered for the afternoon program, at which three scientific papers were presented. At the evening social hour and buffet dinner, the attendance included 80 physicians, physicians' wives and guests.

The meeting proved to be of great interest, and reports from the doctors who attended have been most gratifying.

Arrangements are now being made to schedule a similar meeting in the spring or early summer of 1960, in cooperation with the Des Moines County Medical Society.

The Committee plans to continue scheduling these regional postgraduate meetings. Any county medical society that is interested in cooperating with the State Society in conducting such a program is urged to get in touch with the chairman.

LEE F. HILL, M.D., *Chairman*

GRIEVANCE COMMITTEE

The Grievance Committee of the Iowa State Medical Society met on 12 occasions during 1959 and investigated 14 grievances directed against Iowa physicians. One case was cited to the Judicial Council for consideration.

The vast majority of cases concerned allegedly excessive fees for medical service. Fortunately, most of these charges were unfounded, and the unpleasantness had resulted from poor communication between patient and physician. There were exceptions, however, and the fees in some instances actually had been exorbitant. In each case, without exception, the physician cooperated in fulfilling the recommendation of the Committee.

One of the greatest causes of concern to the Committee is the sort of grievance that approaches a charge of malpractice. The present policy of the Committee is to cease deliberation unless both parties agree to accept the Committee's arbitration and abide by its decisions in full. This type of situation is extremely rare.

Since most grievances arise because of a lack of understanding between the physician and his patient, it is recommended that the Iowa State Medical Society again encourage its members to develop good rapport with their patients.

D. O. MALAND, M.D., *Secretary*

PUBLIC HEALTH COMMITTEE

The Public Health Committee has chosen as its No. 1 project the stimulation of physician participation in community health. To achieve this objective, it feels that there should be an avenue through which the busy physician may obtain advice and assistance in community health problems and projects. The Committee realizes that this type of service requires money. With this fact in mind, it has been interested in the formation of the ISMS Educational and Scientific Trust, so that all those interested in community health, medically directed, can make contributions to that sort of work tax-free. The Trust has now been established—indeed the first meeting of the trustees was held in October.

The Public Health Committee has considered several problems that had been referred to it by other ISMS groups—problems of licensing nursing homes, investigation of special labeling for drugs that might affect drivers, and the new policies of the National Foundation (formerly the National Foundation for Infantile Paralysis).

At the request of several dairies in Iowa, the Committee sponsored the establishment of a Medical Milk Commission for Certified Milk.

E. A. LARSEN, M.D., *Chairman*

SUBCOMMITTEE ON CHRONIC ILLNESS

The Subcommittee on Chronic Illness has held no meetings during the past year, and no matters have been referred to it by the Iowa State Medical Society.

The Subcommittee has continued to work with the Iowa Division of the American Cancer Society on the possibility of establishing a state-wide tumor registry, but it has no report to make at the present time. The biggest problem is the continuing financial support of such a registry after its establishment. Funds are available for initiating the project, and sources of funds for its continuation are being investigated.

The chairman attended the regional meeting on problems of the aging which was held in Minneapolis in October, 1959.

HAROLD W. MORGAN, M.D., *Chairman*

SUBCOMMITTEE ON REHABILITATION

There has been no meeting this past year of the Subcommittee on Rehabilitation—hence, no report. There is a renewed interest in rehabilitation, however, and the members feel that the Subcommittee should be continued.

CARROLL B. LARSON, M.D., *Chairman*

SUBCOMMITTEE ON MATERNAL AND CHILD HEALTH

The Subcommittee on Maternal and Child Health has been less active than usual during the past year. Two matters have been studied, but no new activity has been started. Considerable thought has again been given to the study of perinatal deaths in the state of Iowa. The project did not get started in 1959, and attempts are still being made to activate it.

The Subcommittee also studied the adoption laws of Iowa, but since another ISMS group is going into that matter very thoroughly, it has not pursued the investigation so thoroughly as it otherwise might have.

The publicity on poliomyelitis vaccine was handled through the State Medical Society office, in cooperation with the national campaign.

Dr. Madelene M. Donnelly attended a meeting on "Physicians and Schools" in Highland Park, Illinois. The sessions covered a variety of topics connected with school health. The following closing paragraph from Dr. Donnelly's report, I think, could well be implemented:

"It has always been my hope, since attending these meetings, that the State Medical Society would take the initiating step and call together representatives of other State agencies with a vested interest in school children to meet and formulate some basic school health policies for this State. These policies could then be handed down to County level and used as a guide for the development of policies apropos to each local community. I feel that if the Medical Profession does not take the first step at this time, we are going to lose all status in any school health program and will be supplanted by the physical exercise consultants and find ourselves on the wrong side of the fence."

R. H. MCBRIDE, M.D., *Chairman*

SUBCOMMITTEE ON EXFOLIATIVE CYTOLOGY

The Subcommittee has not met formally, but the members have been in correspondence with one another and have held some telephone conversations.

In the opinion of the Subcommittee, the professional education program has progressed well, and facilities for the examination of smears are now adequate in Iowa.

The Iowa Division of the American Cancer Society has been encouraged to proceed with the state-wide public education program.

The State Medical Society has agreed to cooperate with the Iowa Division of the American Cancer Society in the distribution, on a one-time basis, of a kit for the preparation of vaginal and cervical smears. The

Iowa Division will purchase these and distribute them under the auspices of the ISMS.

K. R. CROSS, M.D., *Chairman*

SUBCOMMITTEE ON NATIONAL HEALTH ASSOCIATIONS

No matters were referred to this Subcommittee for attention during the year, and no meetings were held. Any business in which it might have had a concern was handled by the Committee on Public Health. Consequently, no report is presented.

E. B. FLOERSCH, M.D., *Chairman*

COMMITTEE ON PUBLIC RELATIONS

During the past year, the Public Relations Committee reevaluated its long-range program.

A report from the Legislative Committee indicated that during the 1959 session of the Iowa General Assembly, legislators expressed various criticisms of the medical profession—relating to high fees, lobbying tactics against cult organizations, a lack of interest in increasing the numbers of medical personnel, etc. The Committee is of the opinion that many such criticisms are the result of misunderstandings or lack of knowledge.

The Committee has concluded that the "public image" of the present-day doctor is out-dated, and that the public must be given a more accurate picture of him—i.e., he must be shown to be a man of service, a scientist, a businessman and "a human being." It feels that if the public image of the physician is a true one, legislators will develop a pro-medicine attitude.

As a part of its long-range program to improve the image of the physician, the Committee agreed that members of the medical profession should be made aware of the specific attitudes that are held, and the criticisms that are voiced, by legislators and by other groups. In order to do this, it has scheduled a series of meetings for the purpose of obtaining criticisms from representatives of various business and professional groups, and bringing to light whatever misunderstandings may have given them mistaken impressions of the medical profession.

One such meeting has already been held, a gathering at which nine leading Des Moines businessmen were in attendance. A detailed report on the meeting was mailed to all members of the Society. Future meetings are scheduled with lawyers, teachers and ministers, and with representatives of labor, farm organizations and women's groups. Detailed reports will be sent to the membership.

After that series of meetings has been completed, the Public Relations Committee plans to develop and inaugurate a program which, it hopes, will eliminate many criticisms and areas of misunderstanding.

The Second Hawkeye Science Fair is scheduled to be held in Des Moines on April 8 and 9. The 1959 Fair was most successful. Over 200 exhibits were displayed by high school students from throughout the state. An even bigger representation is expected this year. The Public Relations Committee was instrumental in provoking interest in holding these fairs, projects of which Drake University, the DES MOINES REGISTER AND TRIBUNE and the Iowa State Medical Society are joint sponsors.

A pamphlet defining the purpose and activities of the Grievance Committee was prepared in cooperation with the members of that Committee, and was distributed to all members of the ISMS. The pamphlet was also mailed to newspaper editors and to the news directors of radio and television stations in most parts of the state.

The annual Senior Day program, which is arranged by the Public Relations Committee, was held at Iowa City last May for senior medical students and their wives. The afternoon speeches on socio-economic subjects, and the evening dinner and dance, have proved to be very popular with the students. Plans are now being made for the 1960 Senior Day program.

The Committee cooperated with the National Advertising Council in a campaign to promote polio inoculations.

The "In the Public Interest" page, which appears monthly in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, is being mailed regularly to Iowa news outlets. The articles report on various public service project of the Society.

Constant liaison is maintained with news outlets in Iowa. Appropriate news releases are prepared and distributed throughout the year, and wide coverage is secured for the Annual Meeting in the newspapers and on the radio and television stations.

OTTO N. GLESNE, M.D., *Chairman*

SUBCOMMITTEE ON INTERPROFESSIONAL ACTIVITIES

At its Annual Meeting last April, the ISMS House of Delegates approved the "Physician-Pharmacist Code of Understanding" developed by the Iowa State Medical Society and the Iowa Pharmaceutical Association. The Code, which was printed in pamphlet form and distributed to all members of the Iowa State Medical Society and the Iowa Pharmaceutical Association, has received favorable comment, and on request was mailed to the Texas Medical Society, which contemplates developing a similar physician-pharmacist agreement.

On May 7, executives from 24 pharmaceutical companies attended a "get-acquainted" dinner meeting sponsored by the ISMS and I.Ph.A. An informal program was presented, during which representatives from the drug manufacturers and the sponsoring organizations discussed problems of mutual interest.

The Subcommittee has maintained close liaison with the Iowa Interprofessional Association, of which Dr. Floyd Burgeson, chairman of the Subcommittee, is president. Two meetings of the IIA Executive Council were conducted during the year, and the Annual Meeting of the IIA was held in September. The member organizations of the IIA work closely together on legislative matters of mutual interest.

FLOYD BURGESON, M.D., *Chairman*

COMMITTEE ON HEALTH EDUCATION

The Committee on Health Education has been active in providing films, exhibits, radio broadcasts, telecasts, press releases and speakers as means of conveying information to lay and professional groups.

"Medical Diary" films were telecast over stations KCRG-TV, Cedar Rapids, KQTV, Fort Dodge, and KVTV, Sioux City, until September, 1959, when schedule conflicts necessitated their discontinuance. It is

hoped that a regular schedule of these programs will be resumed in the coming spring or summer. Information and cooperation have been given to county societies and local television stations in developing health and medicine programs.

The 15-minute radio health programs for which the AMA provided transcriptions were carried by stations WOI, Ames, and WSUI, Iowa City, until December, 1959, when schedule conflicts forced the stations to discontinue them at least temporarily. A new radio series entitled "Medicine Milestones," sponsored by the AMA and made available by one of the national radio networks is now being broadcast by seven Iowa stations. The Committee cooperated with the AMA in promoting the use of these programs by making direct contact with the program directors of 15 stations. The programs were originally scheduled to run just 13 weeks, but they have proved so popular that an additional series is being planned.

The Committee also cooperated with the AMA, Lederle Laboratories and the American Broadcasting Company in providing talent for a network program on toxemia of pregnancy that was broadcast in February. It was one of a series entitled "Highroad to Health." Station KIOA, Des Moines, requested and received the Committee's help in securing talent for a program on influenza.

Films from the ISMS film library are being utilized by both professional and lay groups. A special film on disaster planning has been shown to several hospital staffs in Iowa, and has been lent to three out-of-state hospitals.

The health column entitled "Iowa M.D.'s Say" continues to appear in WALLACE'S FARMER. The articles deal with various medical subjects of special interest to farm people, and are written by members of the ISMS.

A special exhibit entitled "Immunization for Family and Community Protection" was secured from the AMA and displayed at the meeting of the Iowa Public Health Association under ISMS sponsorship on April 11-12. The exhibit stressed that the best defense against disease is prevention, and that modern vaccines and toxoids can protect against tetanus, diphtheria, whooping cough, polio and smallpox.

The ISMS cooperated with the State Department of Health and various health associations and lay organizations in the development of the Eleventh Annual Iowa Health Education Workshop, which was held in Ames last June. The chairman of the Committee was a member of the Planning Committee for the Workshop, and 15 members of the Society participated in the program.

The Speakers' Bureau secured speakers for 10 lay meetings and seven county medical society meetings during the past year.

ROBERT B. STICKLER, M.D., *Chairman*

Reports of Special Committees

COMMITTEE ON INDUSTRIAL HEALTH

The Committee was charged by the 1959 House of Delegates with responsibility for reviewing the entire area of "free choice of physician" under the present Iowa Workmen's Compensation Laws. It has been quite active in recent months carrying out that study.

As the first step, your Committee held a meeting with Mr. Earl Jones, the Industrial Commissioner of Iowa. Mr. Jones presented his views on the Workmen's Compensation statutes from the administrative standpoint. The information and materials which he supplied will aid greatly in the Committee's consideration of the problem.

In November, your Committee met with officers of the Iowa Federation of Labor to learn labor's viewpoint on proposed legislation in this area. The meeting proved highly interesting and informative, for everyone present exchanged ideas and reviewed problems freely.

On February 3, 1960, this Committee heard from representatives of management and the insurance industry. Men from two of the largest underwriters of workmen's compensation insurance in this section of the country were in attendance, and conveyed to the Committee some of the highlights of their experience with this type of coverage. Management's position on this problem was presented by two attorneys who are directly concerned with workmen's compensation.

All the material so obtained relative to the question of free choice of physician in workmen's compensation cases will be considered when the Committee meets to draw conclusions and make recommendations on the subject. That meeting will be held prior to the 1960 Annual Meeting of the ISMS, and at it the Committee will formulate appropriate recommendations for the consideration of the ISMS Committee on Legislation and the House of Delegates.

C. HARLAN JOHNSTON, M.D., *Chairman*

COMMITTEE ON MENTAL HEALTH

During the past year, the Mental Health Committee has met on two occasions. It concerned itself with the developing program of the Board of Control of State Institutions, the activities of the Mental Health Authority and the problems of locally-sponsored mental health clinics.

In this last-mentioned area, much time was devoted to revising and updating the "Standards for Mental Health Clinics" originally adopted by the ISMS Executive Council in February, 1957. The Committee is concerned that the mental health clinics—both those presently functioning and those yet to be established—be and remain medical facilities. This should remain a continuing concern of the Mental Health Committee. The Committee's "Revised Standards for Mental Health Clinics in Iowa" received the approval of the ISMS Executive Council at its meeting on February 28, 1960.

Liaison was established between this group and the Mental Health Committee of the Iowa Academy of General Practice through the chairman of the latter, Dr. John Loeck, of Independence. It is recommended that close cooperation between the two committees be continued.

Tentative exploration has been made into the continuing education of the general practitioner in the field of psychiatry. Currently, efforts are being made to establish such programs with the assistance of Dr. William F. Sheeley, of the American Psychiatric Association's General Practitioner Training Program.

During the year, at the suggestion of this Committee, Governor H. C. Loveless saw fit to appoint a broadly

based committee to work on a revision of the Commitment Laws of Iowa.

The chairman of the Mental Health Committee attended the Annual Meeting for Mental Health Representatives held in Chicago by the AMA in November.

He would like to express his appreciation to the following physicians who have so faithfully aided in the work of this Committee: H. C. Merillat, M.D.; L. B. Sedlacek, M.D.; M.B. Emmons, M.D.; W. A. Tice, M.D.; P. G. Couchman, M.D.; J. D. Mahoney, M.D.; G. R. Rausch, M.D.; R. P. Ferguson, M.D.; and J. O. Cromwell, M.D.

PAUL M. KERSTEN, M.D., *Chairman*

COMMITTEE ON RURAL HEALTH

During this past year the Physician Distribution Study, originally sponsored in part by your Committee on Rural Health, has been carried forward. With the authorization of the Trustees, exploration is being made of the possibility of a joint effort by the ISMS, the SUI Institute of Agricultural Medicine, and the SUI Departments of Economics, Sociology and Geography. This effort would consist of (1) collecting and combining data already at hand which would be of help in the matter of physician placement and the so-called doctor shortage and, (2) doing a pilot study in selected towns which could be cited as the basis on which to request a grant to broaden and intensify the survey.

Your Committee points with pride to the fact that S. P. Leinbach, M.D., of Belmond, has this past year been named to the Council on Rural Health of the AMA with primary responsibility for the states of North and South Dakota, Iowa, Minnesota, Nebraska and Wisconsin.

Your Committee plans between now and April to study the matter of the state-wide Rural Health Conference sponsored for the past three years by ISMS and allied health agencies in early spring. Because of an apparent lack of interest in such gatherings, your Committee will explore the possibility of joining with the public health people in their Rural Health Conference generally held in June.

Your Committee on Rural Health, feeling a historical and somewhat proprietary interest in the preceptor program, suggests that after sufficient experience with this program, a thorough evaluation be made of its success in achieving its intended purpose.

The further recommendations of your Committee are: (1) that the presentation on so-called rural practice be continued at Senior Days at the SUI College of Medicine; (2) that an attempt be made to increase the number of approved internships and residencies available in Iowa; (3) that cooperation with the Sears-Roebuck Foundation be continued and that in addition to the economic aspects, sociological and subjective aspects of a community should be included in surveys; and (4) that rural communities be encouraged to secure a minimum of two doctors, for the reason that a lone physician tends to feel isolated and thus is more likely to leave the town.

Iowa was well represented at the AMA National Conference on Rural Health at Grand Rapids in February, for S. P. Leinbach, M.D., J. W. Gauger, M.D., F. H. Top, M.D., and the staff secretary were present.

J. W. GAUGER, M D., *Chairman*

PRECEPTORSHIP COMMITTEE

If cooperation equals last year's, it appears that sufficient preceptors will be enrolled for the coming summer. For the most part, physicians participating are those who have supported the program in the past. Anyone who has had the privilege of assisting the medical school faculty with students, under the preceptorship plan, can understand why those who have been participating always eagerly anticipate a new crop of preceptees.

The Committee discussed the success of the plan this year, particularly as regards the attainment of the goal for which the program was initially instituted. The plan was conceived principally with the thought of enticing more medical students to enter general practice, especially in the State of Iowa. No direct conclusions could be drawn, for the preceptor plan has not been in operation long enough to permit an adequate assay of the trend, but it was felt by the Committee that since the program has been enthusiastically accepted by students and faculty members alike, Iowa physicians should continue to give it their strong support.

The Committee is seeking improvements in the system—particularly an increase in the number of physician preceptors. This would allow us to make a wider selection of assignments, and often to place students in situations best suited to their needs.

D. G. SATTLER, M.D., *Chairman*

COMMITTEE ON BLOOD BANKING

The Committee on Blood Banking has had no problems referred to it during the past year.

WALLACE RINDSKOPF, M.D., *Chairman*

CHIROPRACTIC COMMITTEE

General problems studied by the ISMS Special Committee on Chiropractic during the past year have been: (1) What should be the action of the medical profession in Iowa as to chiropractic? and, (2) What is the relationship of the two groups of chiropractors (Mixer and Straights), and what is the effect of that relationship?

It is the recommendation of your Committee, from a practical and realistic standpoint, that the policy of previous years be continued.

Your Committee will continue on the alert.

RAYMOND A. BERGER, M.D., *Chairman*

MEDICAL ASSISTANTS' ADVISORY COMMITTEE

The year 1959 was a good one for the Iowa Association of Medical Assistants. The placement bureau that it established the previous year is working satisfactorily, and has proved a considerable aid both to employers and to those desirous of employment.

The course offered by the Iowa Continuation Center, at S.U.I. November 9-13, was attended by 25 medical assistants, and they reported that they were well satisfied with it.

The organization's third annual state convention was held in Ottumwa on May 16 and 17, 1959. Dr. Fred Sternagel was the speaker at the luncheon, and Dr. Robert P. Meyers spoke at the banquet. A number of

Ottumwa physicians were kind enough to assist with various panel discussions.

The annual workshop was held in Cedar Falls during the month of July, and was well attended.

The Association is deeply appreciative and very proud of the Washington Freeman Peck award given to it last April by the Iowa State Medical Society.

It is the feeling of the Advisory Committee that the Iowa Association of Medical Assistants is well on its way to success.

FLOYD A. SPRINGER, M.D., *Chairman*

COMMITTEE ON SCIENTIFIC EXHIBITS

The Scientific Exhibit Section at the 1959 Annual Meeting was one of the finest and largest ever presented to an annual session of the Iowa State Medical Society. It utilized over 2,200 square feet of exhibit space. A great deal of time and effort went into the preparation of these exhibits, and the committee members are indeed grateful to the many exhibitors.

The Committee wishes to take this opportunity, however, to urge all delegates, as well as other members of the Society, to visit the scientific exhibits at the 1960 Annual Meeting. You will be well rewarded for your time, and your interest will be a great source of satisfaction to the exhibitors. Only by your interest can the exhibitors judge whether or not the time spent in assembling and showing the exhibit has been worth while.

JAMES T. MCMILLAN, M.D., *Chairman*

RELATIVE VALUE STUDY COMMITTEE

By action of the president and the Board of Trustees, the name of this group has been officially changed from the ISMS Fee Committee to the Relative Value Study Committee. This change is in keeping with the functions performed by the Committee in the past and those that are planned for it to undertake in the future.

As requested by the 1959 House of Delegates, the Committee has formulated plans for conducting a state-wide survey on fees which, when completed, will be used to reevaluate and update the existing IOWA UNIT FEE INDEX. The chairman of the Relative Value Study Committee has appeared before the Board of Trustees to outline the survey campaign and to obtain approval of the budget for the survey. Since the format to be used is being supplied by the AMA, the cost to the State Society in conducting the survey will be nominal. The Board of Trustees approved the program as presented, and steps are being taken to implement this study.

Many hours have been spent by the Relative Value Study Committee in developing the machinery necessary for conducting this study, but only with the cooperation of each individual physician will its efforts meet with success. Plans now call for the mailing of survey questionnaires during March. Your Committee will strive to obtain maximum participation from all ISMS members. A progress report on the number of returned survey forms and on other matters that were given to the Committee for study will be the subjects of a supplemental report at the 1960 Annual Meeting.

Again, we wish to remind you that this survey is being conducted for your benefit, and we urge your participation in this endeavor. Your full cooperation will be necessary if it is to be a success.

FRED STERNAGEL, M.D., *Chairman*

COMMITTEE ON AUTOMOTIVE SAFETY

The Committee on Automotive Safety held its organizational meeting on Sunday, June 8, 1958, in Des Moines. During the first year, it worked in close cooperation with Mr. Russell Brown, acting commissioner of public safety for the State of Iowa. During that first year of operation, as has previously been reported, the Vision Standards Committee met on several occasions, and largely through the efforts of Drs. L. W. Swanson, John T. Bakody and A. H. Downing, the visual standards and requirements for drivers' licenses will remain as they have been until a broader visual testing program can be developed and perfected.

In addition to other advisory activities, the Committee proposed legislation which would require driver-education, and chemical testing for drinking drivers. These proposals included: (1) legislation requiring all persons under 18 years of age who desire drivers' licenses to complete a driver-training course; (2) a Chemical Test for Intoxication law conforming with the Uniform Chemical Test for Intoxication Act drafted by the National Conference of Commissioners on Uniform State Laws, permitting certain "presumptions" on the basis of amounts of alcohol found to be present in the blood of individuals tested; (3) implied consent, meaning that anyone operating a motor vehicle on the highways of the state shall *ipso facto* have consented to a chemical test for drunkenness at the direction of an enforcement officer who has good reason to believe such a test is necessary; (4) a law to protect persons who draw blood for such tests from prosecution for assault and battery or other violation of the subject's rights; and (5) legislation sanctioning use of the breath analyzer as well as the blood test.

The Committee on Legislation carried forward the Automotive Safety Committee's recommendations on these subjects, and bills were introduced at the 1959 General Assembly as requested. Unfortunately, they were tabled.

This year, the Committee and its chairman have kept in touch with Mr. Donald M. Statton, the new commissioner of public safety, and a deputy commissioner, Mr. A. Richard Tow. It is apparent that the Department of Public Safety plans an all-out campaign in support of the legislation which has been described, in the 1961 session of the Legislature.

In August, 1959, Dr. L. W. Swanson represented the Committee at a national traffic safety meeting held in Miami Beach and sponsored by the American Bar Association in cooperation with the President's Committee for Traffic Safety. In general, the purpose of the gathering was to muster support for legislation to improve and upgrade traffic courts.

The Committee has supported the Colorado State Medical Society in promoting a bill, H.R. 1341, before the United States House of Representatives and Senate, which would require reasonable safety features in all passenger-carrying vehicles purchased by the federal government. It is supposed that if cars for sale to the government had to have these pieces of equipment, they would shortly become standard for all automobiles distributed to the general public.

A most important news item was the letter from Dr. F. J. L. Blasingame, executive vice-president of the AMA, to Hon. Kenneth A. Roberts, chairman of the House Subcommittee on Health and Safety. This letter was printed in JAMA and reprinted in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY (pp. 702-705, November, 1959). It pointed out the extreme hazards in automotive travel, and outlined numerous features in automobile design and some safety precautions that can decrease traffic deaths and injuries.

At the request of the Automotive Safety Committee, the State Society distributed to all members an AMA pamphlet entitled "Medical Guide for Physicians in Determining Fitness to Drive a Motor Vehicle."

At the most recent meeting of the Automotive Safety Committee, recommendations were made for the adoption of the following legislation: (1) implied consent; (2) driver-education for teen-age license applicants; (3) de-licensing of persons physically unfit to drive; (4) compulsory safety features in automobiles, particularly those used by the Highway Patrol, in order to set an example for the public.

In summary, the Committee at this time feels that there are three major problems involved in automotive safety: (1) apprehension and prosecution of drunken drivers; (2) revocation of licenses of individuals with disabling diseases and individuals who are not competent to drive motor vehicles; and (3) promotion of necessary safety features as standard automobile equipment.

E. H. BARG, M.D., *Chairman*

OSTEOPATHIC COMMITTEE

The first thing your Osteopathic Committee wants to call to the attention of the membership is the decision rendered shortly after the 1959 Annual Meeting in favor of Loring Hospital Trustees, Sac City (with the ISMS as intervenor) in a suit brought by an osteopath to force staff privileges. This decision, in brief, strengthened the position that hospital trustees have the power to make "reasonable rules in conjunction with medical staffs, and re-emphasizes that the word 'physician' when used alone is generally construed to mean 'doctor of medicine.'"

The four points defining the position of the AMA regarding relationships between M.D.'s and D.O.'s are continually kept in mind by your Committee. They are:

A. All voluntary professional associations between doctors of medicine and those who practice a system of healing not based on scientific principles are unethical.

B. Enactment of medical practice acts requiring all who practice as physicians and surgeons to meet the same qualifications, take the same examinations and graduate from schools approved by the same agency should be encouraged by the constituent associations.

C. It shall not be considered contrary to the PRINCIPLES OF MEDICAL ETHICS for doctors of medicine to teach students in an osteopathic college which is in the process of being converted into an approved medical school under the supervision of the AMA Council on Medical Education and Hospitals.

D. A liaison committee shall be appointed by the Board of Trustees of the American Medical Association to meet with representatives of the American Osteopathic Association, if mutually agreeable, to consider problems of common concern including inter-professional relationships on a national level.

Because your Committee wanted to be certain, word was solicited from AMA legal counsel as to whether or not a meeting between M.D.'s and D.O.'s to discuss matters of mutual interest, as recommended to and later approved by the ISMS Executive Council, would violate point A above. Word was that it definitely would not.

As a result of your Committee's recommendation, subsequently approved by the Executive Council, the president of the ISMS appointed three members of the Osteopathic Committee and two doctors who were not members of the Committee, to a M.D./D.O. Liaison Committee which at this writing has had one exploratory meeting with five doctors of osteopathy. Further meetings are scheduled, and it is felt that it is too early for a report. A supplementary report to the House of Delegates in April will better serve to inform the membership of the direction of the deliberations of this Liaison Committee.

A vexing problem is being dealt with by your Committee. This problem comes about because the American Hospital Association has amended its rules to permit the "listing" of hospitals with osteopaths on their staffs, provided the work of these osteopaths is under the general supervision of doctors of medicine. Since the listing of hospitals by the AHA is one of the requisites for accreditation by the Joint Commission on Accreditation of Hospitals, your Committee is concerned that this liberalizing of AHA listing requirements shall not become a liberalizing of standards for accreditation by the Joint Commission. Although the Joint Commission is composed of 13 M.D.'s out of a total membership of 20, your Committee is still exploring this possibility with the AMA Judicial Council and the Joint Commission on Accreditation.

Your Committee wishes to commend to the entire membership several articles from the "In The Public Interest" feature of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, believing that the portions that particularly concern this Committee's responsibility have been well done and should do much to explain the position of the Medical Society.

J. M. RHODES, M.D., *Chairman*

COMMITEE ON NATIONAL EMERGENCY MEDICAL SERVICE

The Committee on National Emergency Medical Service has continued maintaining close cooperation with the Iowa State Civil Defense authorities, as well as with the Emergency Medical Service Committee of the Iowa Interprofessional Association, to fulfill the responsibilities entailed in providing emergency medical service in the event of any form of disaster.

During the year, a manual was prepared and provided to all interested persons as a guide in the development of a state-wide disaster plan. The development of this guide was considered essential in coordinating the efforts of all participants and in minimizing confusion in planning. The Iowa Director of Civil Defense provided the material and personnel for the preparation of this manual, and assisted greatly in distributing the copies of it.

The Committee has held a number of meetings during the year to complete plans for future projects, including arrangements for a series of regional workshops. At present, these workshops must be postponed because of the unavailability of adequate training material.

During the 1959 Annual Meeting of the Iowa State Medical Society, a civil defense emergency hospital was exhibited in the Veterans Memorial Auditorium for all members of the Society to view. The interest shown in it was most gratifying. Lay people were also invited to see it, and they demonstrated much interest, even though very little publicity about it had been directed to the public as a whole. The State Civil Defense Director has indicated that portable emergency hospital units will be available in the near future for training purposes, and can be utilized at the proposed regional workshops.

In November, Dr. K. J. Gee, a member of the Committee, represented the ISMS at a two-day AMA-sponsored civil defense meeting in Chicago, and subsequently made a concise report of the program presented there. Dr. Gee is to be commended for taking his time to represent the Society at that conference.

The chairman wishes to express his thanks to the members of the Committee on National Emergency Medical Service and to commend them for the work they have done during the year. Likewise, he wishes to thank Dr. Robert C. Hardin, chairman of the Iowa Interprofessional Association's Committee on Emergency Medical Service.

M. E. ALBERTS, M.D., *Chairman*

ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Advisory Committee to the Woman's Auxiliary has seen much activity during the past year. All Auxiliary members have accepted the national organization's theme "Individual Responsibility for Better Community Health," and are engaged upon or have completed projects undertaken in cooperation with or approved by their respective county medical societies.

In counties not yet organized, we are happy that Auxiliary members-at-large are also sharing in joint activities. They have been most helpful and cooperative in projects on which their assistance has been asked, either by the county medical society or by the State Auxiliary. Each county society lacking an Auxiliary is urged to help physicians' wives become an organized group so as to help present a united front of our own "medical family." One new county chapter has been organized during the past year, and another is in the process of formation.

The Iowa Auxiliary's Health Careers Recruitment Committee and Health Educational Loan Fund Committee, working together, are accomplishing much. They continue to sponsor Future Nurse Clubs for high school girls, and are broadening those groups to include girls who can be interested in pursuing other sorts of paramedical careers. Several new clubs have organized in the past year, and Auxiliary members have been encouraged at finding that much of the enrollment in technology, therapy and nursing courses can be traced to the interest generated by Future Nurse Clubs. The Auxiliary again sponsored a one-day Future Nurse Club conference, held this year at Mercy Hospital, Des Moines, in November. It was well attended. The Health Educational Loan Fund is now making loans to girls seeking careers in allied health fields. This fund is supported by an assessment of 50c per Auxiliary member, plus memorial contributions. The Benefit Dance held on Tuesday evening during the Annual Meeting has proven a great success, and increased the Fund in 1959 by $747.50. Ten students are in training at the present time with Auxiliary assistance, six new loans were granted, and graduated students are meeting their obligations in repayment. A dance during the 1960 Annual Meeting is being planned, and the receipts will go to this Fund, since each year there are more and more calls for loans. The need, as a matter of fact, has been increased by the discontinuance of various scholarships that previously were offered in the state. Several county Auxiliaries have their own loan funds, and in some instances they provide scholarships in addition to assisting with the State Auxiliary's Loan Fund.

Representatives of the Auxiliary also take an active part in the work of the Iowa Nursing Careers Committee. The latter is a group composed of organizations interested in recruitment and training of both professional and practical nurses. Auxiliary representatives attended the Careers Workshop of the Midwestern Council of State Leagues for Nursing in Chicago last fall.

The Auxiliary's AMEF Committee continues with its efforts to increase Iowa's contribution to the support of medical schools. It urges the use of memorial and appreciation cards, as well as other contributions to the Fund. The especially designed note paper, the profit from which goes to AMEF, remains a popular item.

The Auxiliary's Civil Defense Committee has been cooperating with the like committee of the ISMS, and has acquainted its members with the Home Preparedness Award Program sponsored by the National Committee. Award kits have been furnished by the State Civil Defense Office to all Auxiliaries in Iowa and to a key member-at-large in each unorganized county.

For the ninth year, the Auxiliary's Committee for Handicapped Craft Sales has cooperated with the Iowa Society for Crippled Children and Adults in the sale of articles made by handicapped workers throughout the state. Sales locations, necessary publicity and saleswomen have been arranged for and provided by this Committee. The proceeds of the sales go to the individuals who made the articles.

The Auxiliary's Legislative Committee has had a very active year. It has cooperated in every way suggested by the ISMS Legislative Committee, and has worked under the direct supervision of that Committee. The chairman and co-chairman of this Auxiliary Committee have been invited to attend the meetings of the ISMS Committee on Legislation, and have been present at those meetings. The chairman was one of the speakers at the ISMS Special Conference on Legislation, in November. The co-chairman attended the regional meeting of key legislative people that was held in the fall. In consequence, Auxiliary members have been most helpful, and have played an important role as liaison between medicine and community. They have aided greatly in channeling information to the public through key people in each county.

The Auxiliary's Community Service Committee (formerly called its Public Relations Committee) continues with its annual award to an Iowa woman other

than a physician's wife or a paid health worker who has contributed outstanding voluntary health work to her community. Each county Auxiliary is urged to take up this work at the local level and to enter its own award-winner's name for consideration by the State Auxiliary. This program is in its fourth year, and the state award is presented at the Annual Meeting of the Auxiliary.

The "Milestones to Marriage" project continues, and demands for this series of nine letters designed for high school seniors increase each year. This past year, the series has been channelled to many more high schools through counselors. It was introduced last summer to a Drake University class in counseling and vocational guidance.

On the recommendation of the ISMS Executive Council, the Auxiliary is again sponsoring the essay contest of the American Association of Physicians and Surgeons. Each year, more counties sponsor the project locally, thus bringing more essays to the attention of the state judges. The two topics from which contestants may choose are "The Advantages of Private Medical Care" and "The Advantages of the American Free Enterprise System." In all counties sponsoring the contest, the medical societies assist the Auxiliaries with the judging and help provide prizes to be awarded on that level.

As it has done in other years, the Auxiliary participated in the Senior Day Program at the SUI College of Medicine last May. With the consent of the ISMS, the Auxiliary has representatives on and helps to support the Public Health Council, the State Safety Committee and many other state organizations in health and educational fields. Auxiliary representatives attended the United Nations Day program. Doctors' Day, March 30, designated by the National Auxiliary to honor members of the medical profession both living and dead, is observed by more Auxiliaries each year. March 30 was the day, in 1842, when a Georgia physician, Dr. Crawford Long, initiated the technic of anesthesia, one of the 10 greatest advances in medicine.

The WOMAN'S AUXILIARY NEWS continues as a popular means of disseminating health educational information to the membership of the organization, and as a way of telling them about project plans and about accomplishments at the county, state and national levels. Requests from other state editors and Auxiliary presidents, as well as national officers and committee chairmen, to be added to the mailing list, indicate that it continues as an outstanding publication.

Membership in the Auxiliary is approaching the 1,200 mark, and the increase in members-at-large has been especially great. With these contacts in unorganized counties, it is hoped that more Auxiliaries may be organized in Iowa in the near future.

EUGENE F. VANEPPS, M.D., *Chairman*

COMMITTEE ON NURSING EDUCATION AND SERVICE

This Committee continues its efforts to determine what it can do, in cooperation with the nursing profession, to train more bedside nurses. It is conceded that to attain better bedside nursing, we must have well trained and also more numerous nursing instructors to staff the nursing schools.

A majority of the members of the Committee attended a joint meeting of the Iowa Nurses Association, Iowa Hospital Association and Board of Nurse Examiners in the fall to discuss the mutual problem of a shortage of nurses in Iowa, and to discuss the report of the special committee, composed of representatives from the INA, Iowa League for Nursing, and ISMS, that studied the 1950 Survey of Nursing in Iowa this past year.

Our Committee has been represented at all Iowa Nursing Careers Committee meetings. The latter group is composed of representatives of organizations interested in nurse recruitment, and it is attempting to acquaint lay persons, schools and others with the need for nurses in all areas of the state, as well as with the need for understanding of the nursing education program. Our interest, as well as that of the ISMS Auxiliary members who are also on this Nursing Careers Committee, is in doing all possible to assist in the effort to secure more nurses and to hold them in Iowa.

We were also represented at the two-day Careers Workshop of the Midwestern Regional Council of State Leagues for Nursing.

Through the Future Nurses Clubs sponsored by our Auxiliary, we find a good percentage of high school graduates are being motivated to enter the nursing schools in the state.

The Committee has studied carefully the administrative and educational policies for Iowa professional schools of nursing, as well as the report of conferences sponsored by the Iowa Board of Nurse Examiners for the faculties of schools of nursing in Iowa (spring, 1957). It has also studied the accreditation program in order to gain a better understanding of its mechanics.

Perhaps a stepped-up two-year program will assist in the solution of the problem. Research continues regarding the proposed two-year program in conjunction with a junior college academic program, and it is hoped that a classification can be worked out for graduates of this type of nursing education. Many states in all parts of the country have two-year junior college programs, and have had good experience with the graduates from them. Both general and specialized education will be included in the two-year college-centered program. (The problem to be solved is the shortage of RN's that necessitates the delegation of 90 per cent of the actual bedside work to nurses' aides in many hospitals.)

The purpose of a two-year program is to prepare girls more quickly to carry out the functions usually delegated to registered nurses. It is not to train them thus briefly for the role of a specialist nurse or of a supervisor. This type of program, moreover, is planned so that it can be applied toward a bachelor's degree at a four-year college or university if the girl decides later to continue her nursing education. We have found that some of the students at the SUI College of Nursing are graduates of two-year junior college programs of other states.

A pilot program is planned by one city school board, in conjunction with the hospital administrators and other interested persons in the community. It is their hope that a curriculum for nurse training can be offered at their junior college at the start of the 1960-1961 school year.

The Committee hopes, by cooperating with the nursing profession in every possible way, to assist these two-year students to receive the best possible training. It is agreed that physicians have a legitimate interest

in nursing, and this Committee wants it clearly understood that it does not advocate any lowering of standards.

The Committee invites the assistance of any ISMS member who has any suggestions to offer on the solving of the bedside nurse shortage.

HENNING W. MATHIASEN, M.D., *Chairman*

HISTORICAL COMMITTEE

The function of the ISMS Historical Committee is to arrange for the writing of histories of the various county medical societies by local physicians, and to arrange for their publication in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Under the leadership of Dr. Jeannette Dean-Throckmorton, the Committee has accomplished a great deal along this line. Recently, Dr. Jeannette felt that she must give up the chairmanship.

Dr. J. R. Dewey, of Schaller, wrote me during the year that he had a history of the Sac County Medical Society almost ready. Very unfortunately, Dr. Dewey's death occurred a short time later. Dr. P. W. VanMetre, of Rockwell City, has Dr. Dewey's manuscript, and is attempting to have some other physician complete it.

Various doctors in other parts of the state have agreed to provide histories, and time alone will tell how many of their promises will be fulfilled.

I sincerely trust that the ISMS president will be able to prevail upon Dr. Jeannette to accept the chairmanship again. I think that of all members, she is best qualified for this work.

CLYDE A. BOICE, M.D., *Chairman*

COMMITTEE ON GROUP INSURANCE

The Committee on Group Insurance submits the following report covering its activities during the past year.

GROUP LIFE INSURANCE

The minimum enrollment requirement of the life insurance plan has been attained, and the policies issued to ISMS members who made application during the initial enrollment period. Several claims have been paid since the program went into effect, and no problems of an unusual nature have arisen. The Committee has been informed that some members who failed to enroll during the period of open enrollment now wish to participate in the program. We recommend that they write or call Holmes, Prouty, Murphy & May, 1022 High Street, Des Moines 9, or the ISMS headquarters office for information about the enrollment procedure.

GROUP ACCIDENT AND SICKNESS DISABILITY INSURANCE

No unusual problems in connection with this program have been encountered during the past year. The claims experience, although higher than last year's, remains satisfactory.

The carrier of the basic coverage, the Commercial Insurance Company of Newark, New Jersey, offered to expand the coverage period for members of the Society who wish additional protection. The present basic and extended coverage policies, originally approved by the Society, will continue to be available, and members who wish to do so may continue it without change. The new expanded coverage now being offered will be subject to age qualifications, and the carrier will require evidence of insurability unless 50 per cent of the eligible members apply for it.

The Committee on Group Insurance endorsed this program, and so notified the ISMS Executive Council on November 18, 1959. Holmes, Prouty, Murphy & May have been taking the proper steps to make this additional coverage available to members of the Society.

ISMS GROUP BLUE CROSS-BLUE SHIELD

On November 18, 1959, your Committee reported to the Executive Council on the status of this program. The following communication, dated December 3, 1959, from the president of ISMS to all members of the Society sets forth the problem as well as the changes authorized:

DEAR DOCTOR:

A special statewide group coverage by Blue Cross and Blue Shield, prepared by our Committee on Group Insurance and approved by the House of Delegates, did not have the required 50 per cent enrollment. However, the interest was great enough that approximately 500 members applied for new Blue Cross coverage, and about 300 of them applied for both Blue Cross and Blue Shield. Upon hearing a report that Blue Cross and Blue Shield would accept a smaller group at the previously announced rates, the Executive Council of the Iowa State Medical Society, on November 18, 1959, approved a motion to endorse the sale of the Blue Cross and Blue Shield group plans to less than the original 50 per cent at the same premium rates. It was also recommended that the enrollment period be extended to February 1, 1960. Accordingly, Blue Cross and Blue Shield have agreed to implement this program to be effective in January, 1960. All applications on hand, or those received by December 20, 1959, will be effective in January. All applications received from December 21 through January 20, 1960, will be made effective in February, 1960. Premium rates of the new statewide group will be exactly the same as announced earlier.

The following plans will now be in effect:

(1) Those members of the Iowa State Medical Society who desire to do so, may enroll in the new statewide group.

(2) There will be no change in existing groups so long as one person, either physician or employee, remains in the group. Also, the existing groups will continue at the same rates during 1960. This procedure is placed in operation in lieu of establishing a new employees' state-wide group. Employees of physicians may continue to join local county or physicians' groups.

(3) Future billings of your present local county medical society will continue and will include, if you agree, billings for both groups. Those physicians enrolling in the new statewide group who are in a county where group billing is not available, will receive direct billings on an annual basis with a service charge of $1.00 per biiling.

An additional enrollment card is enclosed, but if you have already forwarded a card, it will not be necessary to reapply.

Sincerely,

JOHN W. BILLINGSLEY, M.D.
President

The Blue Cross-Blue Shield office reports that implementation of this program is complete, and that coverage is being provided to the physicians who have enrolled.

W. O. PURDY, M.D., *Chairman*

IOWA BAR LIAISON COMMITTEE

During the past year, your Iowa Bar Liaison Committee has met with the Iowa State Bar Association's Committee for Better Inter-Professional Relationships with the Medical Profession. At this joint meeting, most of the discussion concerned whether or not there is a present need for an impartial medical expert witness panel in Iowa.

This joint committee has reviewed and studied the operation and utilization of this type of panel in various parts of the country. Two courses of action are to be pursued: (1) The Association of District Judges will be notified that the joint committee is exploring the feasibility of impartial medical witness panels, and that body will be invited to comment, not only as to the need for such panels, but also as to the merits and demerits of them. (2) The joint committee will continue to observe developments in other states, particularly those with comparable physician pools and physician distributions.

The Iowa Bar Liaison Committee will continue to investigate such technics independently as well as in conjunction with the Bar Association's group, whenever such study is deemed advisable.

Your Committee is pleased to note that many successful joint meetings of lawyers and doctors have been held during the past year at the city and county levels, and that additional such gatherings are being planned. It feels that this is an excellent way to foster cooperation and understanding between the two professions.

Sufficient copies of the pamphlet "Standards of Practice Governing Lawyers and Physicians" are available for distribution at these meetings. Those who wish supplies of this publication are asked to address their requests to the Committee or the State Society office.

D. C. CONZETT, M.D., *Chairman*

MEDICARE CLAIMS COMMITTEE

The members of the Medicare Claims Committee, both as individuals and together, have continued to advise the staff of the State Medical Society on the administration of Medicare claims. They have held one formal meeting during the past year to examine and review claims that had been referred to them for study. No apparent rise in the number of claims reviewed has been noted. Approximately five per cent of the total Medicare claims processed have been examined by this Committee.

Your Committee invites any questions or criticisms that members of the Society may have regarding the administration of Medicare claims. Since very few problems have been reported in the past, it is our belief that in the area of claim review, the Medicare program in Iowa is functioning quite satisfactorily.

A. B. PHILLIPS, M.D., *Chairman*

ADVANCE PLANNING COMMITTEE

The Advance Planning Committee has held no meetings since April, 1959. Since its appointment, the Policy Evaluation Committee has been studying in detail the main problems on which the Advance Planning Committee made recommendations.

Since all advance planning must rest within the scope of ISMS policy, it is logical for the Policy Evaluation Committee to absorb the duties outlined for the Advance Planning Committee.

GEORGE G. YOUNG, M.D., *Chairman*

COMMITTEE ON PARAMEDICAL SERVICES

The activities of the Committee on Paramedical Services this past year have been primarily those of liaison with the Iowa Chapter of the American Physical Therapy Association. One result of its meetings with representatives of that organization was an editorial, "Physical Therapists," published in the JOURNAL OF IOWA STATE MEDICAL SOCIETY (49:357, June 1959), and reprinted and distributed to all chapters of the APTA.

The Committee, between now and the Annual Meeting, plans a thorough study of the report of the AMA Committee to Study the Relationships of Medicine With Allied Health Professions and Services, and also a statutory survey by the AMA Legal Division entitled "Regulation and Activities in Selected Health Fields." These documents will be of value in the Committee's activities and deliberations, and the AMA Committee has solicited its advice and assistance.

F. EBERLE THORNTON, M.D., *Chairman*

POLICY EVALUATION COMMITTEE

On February 17, 1960, this Special Committee held its fourth meeting and continued its study of Iowa Medical Service.

Mr. William Poorman, an actuarial member of Iowa Medical Service, gave a report on the fiscal policies of I.M.S. since its inception in 1945. He pointed out many of the basic concepts essential to any health and accident insurance coverage.

Dr. Earl Lowry, president of I.M.S., brought the Committee up to date on recent Blue Shield developments, among them being the experience thus far with the Senior 65 and B400 policies. He also presented actuarial data concerning x-ray and laboratory coverage (XL) since this was taken over by the Blue Shield from Blue Cross.

Following the reports of these guests, the Committee discussed the material compiled at previous meetings. Those data have been condensed into a so-called summary.

As you are aware, the House of Delegates in 1959 called for an interim evaluation after one year and a reevaluation after two years of the Senior 65 and the new Middle Income (B400) plans.

The summary of information compiled to date by the Committee will be revised and published in the April issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, and also placed in the packet of materials forwarded to delegates in advance of the 1960 meeting of the House of Delegates. No final recommendations will be made until the 1961 meeting of the House.

The Blue Shield program in particular, as well as health and accident coverage in general, can't easily be adjusted to everyone's satisfaction. To date, no easy solution is in sight.

WENDELL L. DOWNING, M.D., *Chairman*

PUBLICATIONS COMMITTEE

As it had in previous year, during 1959 the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY published the scientific papers delivered at meetings of the State Medical Society and unsolicited manuscripts contributed by the Society's members. In addition, because the reduced number of papers from the Annual Meeting threatened us with a dearth of scientific materials, we invited and secured several presentations that had been made at meetings of the Iowa Academy of General Practice, at

some county and district medical meetings throughout the state, and at some of the meetings of Iowa specialty groups. The materials so obtained altogether satisfied the JOURNAL's requirements as regards both quality and interest.

ISMS members who have charge of coming meetings of county, regional, general practice or specialty groups in Iowa can benefit physicians throughout the state if they will (1) inform us no less than six weeks in advance about the places, times, topics and participants, so that the JOURNAL can help with their advance publicity, and (2) secure manuscripts from those of their speakers whose ideas, they feel, will merit general attention.

The JOURNAL's major innovation, in 1959, was the series entitled "In the Public Interest," printed on light green paper. The articles appearing under that heading deal, for the most part, with medico-economic topics, and reprints of them are being mailed regularly to Iowa's lawmakers at the state and national levels, to news media throughout the state, and to members of the ISMS Woman's Auxiliary.

We are continuing to make changes in the JOURNAL designed to improve its usefulness to the physicians of Iowa and to render it more attractive.

As usual, we assure the members of the Society that we welcome whatever criticisms and suggestions they wish to offer.

EVERETT M. GEORGE, M.D., *Editor*

The Speaker then called for supplemental reports, and following their presentation to the House of Delegates referred them to the proper reference committees for study.

SUPPLEMENTAL REPORT OF THE BOARD OF TRUSTEES

(Referred to the Reference Committee on Reports of Officers for study and recommendation.)

This supplemental report is lengthy and detailed. The Board of Trustees feels there are a number of projects that deserve special pointing up to the delegates. When so many physicians have donated their time and effort to the work of the Society, we believe the least we should do is to be certain the delegates are informed of this activity.

Each year at the time of the annual meeting, we express hope that in the ensuing year the Society will have fewer major problems to cope with, but to the present this hope has not been realized. The past year has been no different from previous years, and perhaps it has been even more difficult than its predecessors because of the serious threat of enactment of Forand-type legislation and because of problems with the vendor payment program and Blue Shield. The vendor payment program and Blue Shield will be reviewed by appropriate Society committee chairmen, so I'll not comment on them further, except to point out that attending to these problems requires a great deal of time and effort on the part of many people, and adds to the expense of the operation of the Society.

When I discussed the composition of this report with other members of the Board, it was agreed that I should outline to you, as briefly as possible, the major projects of the Society, the special committee achievements, and the finances.

MAJOR PROJECTS

Forand Legislation—The Board of Trustees has made available the complete facilities of the State Society to develop and implement a physician and public information program on the dangers inherent in Forand-type legislation. This has been a cooperative effort on the part of the Board and various committees of the Society but, in particular, the Legislative Committee. As reported to the full membership earlier, the Iowa State Medical Society was one of 12 societies in the country which were selected to have official representatives appear as witnesses before the House Ways and Means Committee of Congress to present testimony concerning health care of the aged. We are confident we have been as active as any other state society in the nation in the development of educational material and resolutions in a concerted effort to inform the people of Iowa, and especially all Iowa Congressmen, of reasons why Forand-type legislation would not serve the best interests of the aged populace.

Blue Shield—The Policy Evaluation Committee, appointed by the president last summer, has made an extensive study of all Blue Shield proposals, and its interim progress report has been made available to all members and a supplemental report is to be presented at this meeting.

Relative Value Fee Study—A year ago, the Relative Value Study Committee recommended to the House of Delegates that it be given opportunity to conduct necessary studies and investigations to eliminate discrepancies in the IOWA UNIT FEE INDEX. Since this project involved the expenditure of funds, the matter was referred to the Board of Trustees for its consideration. The Board of Trustees approved the program, and the staff of the Society has worked with the Committee in implementing it.

Iowa Physicians Political League—According to an agency agreement, the Society is providing administrative services for the League at cost.

Medicare—The existing Medicare contract will terminate on April 30 of this year. During the period May 1, 1959, to March 31, 1960, the Society processed 2,666 claims, for a total of $194,309.81. Instead of negotiating a contract for 12 months, the Board of Trustees requested a 90-day contract so that if the House of Delegates should elect to alter the relationship between the Society and Medicare, this could be accomplished.

Joint Council for Health Care of the Aged—The State Society has maintained its interest in this Council, and its monthly meetings have been attended by at least two Medical Society representatives. This Council, as well as the Society, is cooperating with the Governor's Commission for Senior Citizens that is charged with the responsibility of determining the existing problems of persons over age 65 in Iowa. This Governor's Commission was created for the purpose of accumulating information which will be used in a comprehensive report on the problems of the aged that will be prepared following, or during, the White House Conference on Aging in 1961. We believe it is because of the Society's interest in the Joint Council and problems on aging that physicians, and members of the Society, were named as chairmen of the Health and Rehabilitation Committees of the Governor's Commission on Senior Citizens.

Annual Meeting—For the second year, the scientific

program, as recommended by the Executive Council in 1958, has been planned to include two full days of general sessions. Subjects of interest to all physicians will be presented on Monday and Tuesday, and a special address by the chairman of the American Medical Association's Board of Trustees is scheduled for Wednesday morning. On Monday, the program will be devoted to "Medicine and Sports." Coaches, physical education instructors, and other interested personnel from every high school, junior college, college and university in the state have been invited to attend this worthwhile and educational session. Between 200 and 300 of these honored guests are expected to be in attendance on Monday.

Physician Distribution Survey—Questionnaires, as you know, have been sent to all members of the Society, and 2,200 of them have been returned. The survey is being conducted for the purpose of determining if and where there are doctor shortages, and where shortages are likely to occur in future years. This detailed study will be especially helpful to the Placement Bureau, since many physicians seeking locations in Iowa request information on physician population ratios and on the age distribution of physicians in a particular locality.

Physician Placement—In the seven months that ended on January 31, 1960, the Physician Placement Bureau, a service to both physicians seeking locations and to communities that are seeking physicians, provided assistance to 34 general practitioners and 50 specialists who were interested in establishing practices in Iowa. As an additional service, the names of senior medical students who have indicated an interest in general practice are made available to communities, as well as the names and locations of the hospitals where the students plan to intern after graduation.

Medical Assistants—The Medical Assistants' Advisory Committee, working with the Iowa Association of Medical Assistants and the Continuation Center at State University of Iowa, organized the first Iowa in-service training program for medical assistants. The training program was held in Iowa City, November 9-13, and was attended by 25 medical assistants. It was well received, and there is interest in continuing it next fall. The placement service for medical assistants that was set up by this Committee, in cooperation with the Iowa Association of Medical Assistants and the Iowa State Employment Service, has functioned effectively.

Hawkeye Science Fair—The second fair, sponsored by Drake University, the DES MOINES REGISTER AND TRIBUNE, and the Iowa State Medical Society, was held here April 8-9. Two hundred ten exhibits prepared by Iowa high school students were displayed, and 9,000 people attended the fair. Your Board of Trustees believes this is one of the most worthwhile and valuable public service projects of the Society. We plan to continue our sponsorship of the Hawkeye Science Fair, while encouraging county medical societies to promote and support regional fairs in their local areas.

Last August, the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY initiated a series of articles entitled "In the Public Interest." Each month this special section is devoted to a discussion of special service projects of the Society, socio-economic problems, and other subjects of interest to both professional and lay readers. Reprints of these articles are mailed regularly to all Iowa legislators, state officials and news outlets for their information. These articles provide an accurate picture of some of the functions, purposes and objectives of the Iowa State Medical Society.

Iowa Interprofessional Association—As a member of the Iowa Interprofessional Association, the State Society has taken the lead in encouraging the development of local and state disaster plans. A special conference was held in October in the Society office at which representatives of the member organizations and the Office of Civil Defense met to discuss methods of improving and implementing disaster plans.

COMMITTEE ACHIEVEMENTS

Of the 47 committees, most have been active, and comment on a few of the projects that have been initiated this year would appear to be appropriate.

In November, a statewide Legislative Conference was held in Des Moines to discuss problems of the aged and the threat of Forand-type legislation.

After receiving the approval of the House of Delegates last April, the "Doctor-Pharmacist Code of Understanding," developed by the Interprofessional Activities Committee of the Society, in cooperation with the Iowa Pharmaceutical Association, was mailed to all members of both organizations. Since that time, several state medical societies have requested copies of this code for their own use, and have indicated an interest in developing similar codes of understanding in their states. In May, the code was discussed at a meeting, sponsored by the Society and the Iowa Pharmaceutical Association, for executives representing 24 pharmaceutical manufacturing companies. Problems of mutual interest were discussed at this informal dinner meeting, the first of its kind. Comments from those in attendance indicated that the meeting was of great interest and value.

A special article was prepared explaining the purpose and functioning of the Grievance Committee of the Society, and reprints were sent to all physicians and news outlets. A regional postgraduate course, developed under the supervision of the Committee on Medical Education and Hospitals, was held in Fort Dodge in March, 1959. A similar course was conducted in Council Bluffs in October, and a third one is scheduled to be held at Burlington in May.

The Iowa State Medical Society's Subcommittee on the Medical Examiner Law is conducting a physician-information program to acquaint the membership with provisions of the new county medical examiner law that will go into effect on January 2, 1961. It expects to distribute a special pamphlet on this law to the profession this summer.

The Medico-Legal Committee has conducted a survey of the county medical societies to ascertain the number and kinds of malpractice suits in which members of the Society have been involved. The Committee has not been able to accomplish a great deal in this connection because of the failure of a number of county medical societies to reply, and reluctance of many of the malpractice insurance carriers to provide this type of data. This Committee is studying malpractice screening panels, but as of this time is not prepared to comment on the value of them.

The Iowa State Medical Society's Bar Liaison Committee has met with a committee of the Iowa State Bar Association in the interest of improving relations

between the two professions. The committees have shown interest in the creation of impartial medical expert witness panels in Iowa, but as of this date a definite decision has not been reached. It is anticipated that study in this area will continue.

In an effort to learn of current attitudes toward the medical profession, special meetings with representatives of labor, education, law, the ministry, and others, are being planned by the Public Relations Committee. One meeting has been held with leading Des Moines businessmen, and a detailed report was sent to the membership. It is hoped that after obtaining specific information from these groups, a long-range program can be developed to create a more accurate "public image" of the doctor as a practitioner, a civic leader, a businessman, and a "human being."

The Committee on Automotive Safety has continued to maintain an excellent relationship with the Department of Public Safety. Copies of a special brochure entitled "Medical Guide for Physicians in Determining Fitness to Drive a Motor Vehicle" have been distributed to all members of the Society. Copies have also been sent to Iowa legislators to acquaint them with some of the medical problems involved in automotive safety.

"Revised Standards for Mental Health Clinics" were approved by the Executive Council at its meeting on February 28, 1960, and will be published in the May JOURNAL of the Society.

Again this year, the Preceptor Committee has recruited physicians to serve as preceptors to junior medical students this summer.

The Committee on Nursing Education and Service is studying a two-year training course for nurses that can be established in conjunction with junior college programs. These accelerated two-year training programs for nurses are now in effect in several states. The Committee expects to continue its exploration of this project.

The Committee on Group Insurance, working with Blue Cross-Blue Shield, accomplished the formation of a statewide Blue Cross-Blue Shield group plan for members of our Medical Society. This Committee has also continued its interest in other group plans in which the Society is involved.

These are but a few of many projects. I hope eacn of you will acquaint himself with other work that is being carried on in the Society. A careful reading of the HANDBOOK and special attention to the supplemental reports to be presented today are respectfully suggested.

STAFF

Our executive director was one of approximately 120 top management executives who were selected from throughout the world to attend an advanced management course at the Harvard University Graduate School of Business Administration. Mr. Taylor was granted leave of absence from September 15 to December 15 in order to participate in it. We were honored that he was chosen, particularly since he was the first Medical Association person to be selected. For his sake, as well as the Society's, the Board was willing and anxious to have Mr. Taylor take this special management training.

In January, Mr. Gerald Buckles, field secretary, became a half-time employee of the American Medical Association, when he was appointed field consultant for Iowa and Minnesota to organize physicians to oppose Forand-type legislation. Since January, the American Medical Association has paid half of Mr. Buckles' expenses and salary. It is our understanding with the American Medical Association that Mr. Buckles will be returned to the Iowa State Medical Society for full-time service on June 1, 1960. We know Mr. Buckles is pleased to have this opportunity to serve the American Medical Association, and the Board of Trustees is flattered that Iowa was asked to make available one of its employees for this special assignment.

FINANCES

We hope each of you has carefully examined the Treasurer's Report appearing in the HANDBOOK. We're pleased to report that in 1959 we were able to increase the Society's reserves to $70,000.

Since the first of the year, the Board of Trustees has authorized the establishment of a special provision for a building fund. To obtain capital for this special fund, the Building—Reserve for Depreciation account was adjusted to $10,000. This amount was then set aside in a separate bank account. In 1960 and future years, the Society building will be depreciated at the rate of 10 per cent per year. This amount (approximating $4,500 per year) will be set aside, added to the $10,000 already so designated and invested in savings and/or appropriate securities. Income from these investments will be re-invested as a part of the provision for Building Fund. Therefore, within a 10-year period the Society will have funds available for necessary capital improvements.

You will note from viewing the Treasurer's Report that the Board of Trustees has continued to diversify its investments. As of December 31, 1959, investment of Society reserves was divided about equally between government bonds and common stock. The Board, in its continuing effort to assure maximum utilization of existing revenue, is exploring methods of obtaining income from short term investment of Iowa State Medical Society operating funds.

The 1960 budget, as approved by the Board, should enable the Society to meet its financial obligations without experiencing an operational deficit. However, if expenditures are consistent with the budget, there will be little opportunity to add to the reserve or to expand Society activities. Therefore, the Board of Trustees recommends that the Iowa State Medical Society's annual dues remain at $80 in 1961.

Although this year has been an extremely difficult and trying one, the Board believes it has been one of the busiest and most productive in the history of the State Medical Society. This is confirmed by reports that appear in the HANDBOOK and will be further supported by supplementary information presented today.

Since the last annual meeting, and up to the time these remarks were prepared, 133 official committee meetings were held. Mentioning this takes little effort; but arranging, conducting, preparing minutes, and carrying out requests of these committees represents a great amount of time, effort, and expense. These 133 official meetings constitute only a small share of all the conferences that have been held.

Your Board of Trustees, with advice from committees and councils, has furthered and will continue to

further the interests of the Iowa State Medical Society in accordance with the decisions of this House of Delegates. We are charged with the responsibility of administering the business affairs of the Society, and whether or not these duties have been discharged properly is subject to the individual study of each member of this House. We have accounted to you on the bulk of Society activity during the past year, but much has been left unsaid. The Trustees will be in attendance at the hearings of the reference committee to which this report is referred, and will be available throughout the Annual Meeting to visit with the delegates and members about any question that may be raised concerning the fiscal affairs of the Society.

G. H. SCANLON, M.D., *Chairman*

At the conclusion of his report as chairman of the Board of Trustees, Dr. Scanlon provided a brief summary on the financial status of the ISMS Educational Loan Fund. He reported loans outstanding as of April 22, 1960, totaling $127,942.39 and total amount repaid as of April 22, 1960, since the inception of the program, $34,831.03. Total amount of loans since the beginning of the program, $162,773.42. During the 1959-1960 year, 36 students participated. Total number of loans since the beginning of the program, 110. Total number repaid in full, 22. Total number outstanding, 88.

Supplemental Reports of Standing Committees

COMMITTEE ON LEGISLATION

(Referred to the Reference Committee on Legislation and Public Relations. For final action by the House of Delegates, see the report of the reference committee.)

This year your Committee on Legislation has grappled with two extremely difficult and complex problems, (1) Forand-type legislation, and (2) the Vendor Payment Program. This supplemental report will be confined to a discussion of these two subjects.

At the outset it must be recognized that both the Forand Bill and the Vendor Payment Program constitute "socialized medicine" by any definition of the term. However, it must be clearly kept in mind that the Vendor Payment Program provides medical services for patients who are "indigent" in every respect. The Forand Bill would duplicate what is already being done for these indigent, but in addition it would provide medical care for many more who have sufficient resources.

The provision of medical care to patients who are truly indigent constitutes a well-entrenched and long established exception to the voluntary system of medical care. This type of "socialized medicine" also has been and is being applied to other groups, notably civil service personnel, veterans and Indians. The group covered by the Vendor Payment Program includes the blind, dependent children and those persons over age 65 who are down to their last $300, apart from their equity in a home which is limited by statute to $2,500 for single persons and $3,000 for couples.

No one can deny that old age assistance recipients who meet these tests are "indigent" in every respect. Nor can it be denied that the total monthly payments to these persons (approximately $98 for a single recipient and approximately $167 for a couple) are not sufficient to permit them to purchase very much medical and health care. It should also be noted that the law requires children, and others who may be liable for the support of old age assistance recipients, to contribute out of their own means to the total monthly budget made available to the recipients.

The vendor payment problem has legislative aspects but goes far beyond the scope of the functions of the Committee on Legislation. The basic problem is that of providing medical care to the proved indigent under a program which does not constitute "socialized medicine"; or if this is not possible, then under a program which minimizes the risks and disadvantages of a socialistic system.

There are only two ways of providing medical care to patients who are truly indigent. The traditional way has been for the doctor to provide medical services at no cost or at such small cost as the patient could pay. Any other program which involves payment to the physician for his services necessarily introduces a third party into the picture. Even if the third party is a private charity, there exists some threat of control over the practice of medicine by those disbursing the funds. The Vendor Payment Program utilizes public funds and introduces the federal, state and local governments into the picture as third parties.

Your Committee on Legislation has been directed to report on three alternative courses which would minimize the threat of dominance by federal, state and local governments as third parties intervening between the doctor and his indigent patient. Because one of these alternatives involves the possible use of indemnity insurance, which is also involved in the Forand-type legislation problem, we shall defer comment on these three alternatives until after a discussion of the problems posed by the Forand Bill.

FORAND-TYPE LEGISLATION

We shall not discuss the details of the Forand Bill, for they are set forth in our report on page 31 of the HANDBOOK. Since that report was prepared, the House Ways and Means Committee decisively voted *not* to report out this measure, but unfortunately, this does not terminate the threat, for backers of the Bill are attempting to get sufficient signatures to bring it up for a vote, and there are also indications that the Bill may be presented from the floor as an amendment to Social Security legislation that will be before the Congress.

There have been more recent developments that place the Forand issue on a narrower and more difficult plane. In his testimony before the House Ways and Means Committee, Arthur S. Flemming, Secretary of Health, Education and Welfare, stated: "I want to make it clear that as an administration, we will oppose any program of compulsory health insurance." He continued on, however, to say in substance that voluntary hospital insurance programs will probably be unable to provide policies at rates that all aged persons can afford to pay. He then stated six guiding principles which in brief were: (1) Health insurance should not be compulsory; (2) No program should stifle private initiative in the health insurance field; (3) The existing private systems should be strengthened and stimulated; (4) "We should preserve and strengthen the private relationships which now characterize the ren-

dering of health care services"; (5) That all aged persons should have the opportunity of participating in any program that might be developed; (6) That "major medical" insurance should be available to the aged.

Two weeks after Mr. Flemming's statement, eight Republican senators offered a bill which appears to have been designed to conform to Mr. Flemming's six principles. The proposed bill contemplates a voluntary insurance program for persons over 65 at a cost of $13.00 per month. State funds and federal matching funds would be used to make this insurance available to those with incomes of less than $3,600 per year. Subscribers with less than $500 per year income would pay nothing. Those with incomes between $500 and $1,000 per year would pay 50c per month and on up on a graduating scale.

Although your Committee has seen no statements on the subject to date, it would appear that this type of insurance coverage would overlap and possibly supersede the present Vendor Payment Program.

It thus appears that the Vendor Payment Program, with its many problems and difficulties, is not for the present an expanding program but is merely a newer way of providing medical care for the truly indigent. On the other hand the latest Forand-type programs would greatly expand the provision of medical care through the use of state and federal funds to persons who are not "indigent."

Your Committee on Legislation feels that of these two problems the Forand threat is by all odds the more serious. It recommends a continuation of the strenuous legislative activities sponsored by the Iowa State Medical Society in an effort to defeat the Forand Bill and to solve in the best possible way the problems connected therewith.

VENDOR PAYMENT PROGRAM

In 1951, the Federal Social Security Law was amended to provide for vendor payments. Since 1939, federal funds have been used in connection with the public welfare programs under the Federal Social Security Law, but until 1951 all grants under the program went directly to the recipients. As is well known, the 1951 amendment made it possible for certain payments which formerly had come directly to the recipient to be made to the vendors of certain health supplies and services.

In 1957, your Legislative Committee, in accordance with a policy repeatedly adopted by the House of Delegates, supported the amendment to the Iowa Code which made possible such "vendor payments" in Iowa. Shortly after this program went into effect, as a result of the change in the matching formula, the House of Delegates on February 22, 1959, voted "to temporarily tolerate but disapprove this limited medical care program as now in effect." The House also directed that the Executive Council direct "an appropriate committee to negotiate a system whereby:

1. The program shall be conducted in a manner which insures the maximum possible amount of local control, or

2. The vendor payment funds could be allocated to private voluntary health insurance systems for coverage for those involved."

This matter was referred to your Committee on Legislation, and it reported to the April, 1959, House of Delegates some preliminary observations on the possibility of obtaining greater local control of the Vendor Payment Program, or of utilizing Blue Shield or commercial insurance companies as fiscal agents for receiving public funds by way of premiums and disbursing them to physicians or recipients in accordance with usual Blue Shield and insurance procedures. The House of Delegates last year, in substance, directed that the Committee on Legislation continue to study and negotiate concerning these alternatives.

Although your Committee has learned that the study and negotiation of these alternatives gets into problems far removed from the legislative field, it has given considerable study to these problems, and reports thereon as follows:

1. *Greater Local Control:* It is impossible to avoid the necessity of having a "single state agency" to administer or supervise the administration of the Vendor Payment Program, unless the Federal Social Security Law itself is amended. (See Title 42, Sections 602, 1202(a)(3), 302(a)(3) and 1352(a)(3) of the U. S. Code which require that a state plan "either provide for the establishment or designation of a single state agency to supervise the administration of the plan.")

The purpose of this provision, as explained by representatives of the State Department of Social Welfare, is to make certain that the program has uniformity of administration and that its benefits will be available uniformly to recipients in all counties of the state.

The federal law makes it necessary for a single state agency to be in charge of the program. The official policy of the State Department of Social Welfare, however, is one of giving as nearly complete authority as possible to the county boards of social welfare. It has also been the State Department's stated purpose to leave to physicians the determination of the need for medical care and other purely professional considerations, free from the interference of lay officials. Your Committee does not attempt to comment on the success or failure of this policy, but believes that the State Department of Social Welfare would like to undertake whatever measures are permitted by law to improve the administration and understanding of the present program.

Our conclusion with respect to the local control item is that there may be a discrepancy between the policies of the State Department of Social Welfare and the actual practice in a given county, but there is no way of altering the fundamental policy without amending the Federal Social Security Act.

2. *Utilization of Commercial Insurance:* Under federal law the "single state agency" may supervise the administration of the plan, rather than administer the plan completely. On the assumption that the State Department of Social Welfare would have authority to use vendor payment funds to purchase health insurance policies for public-assistance recipients, the possibility of utilization of commercial insurance was explored.

The following statement has been given your Committee by the Bankers Life Company. It is the result of that firm's study as to what role, if any, a commercial insurer might play in the vendor payment plan currently employed by the Iowa Department of Social Welfare:

"In considering the desirability of using an insurer, it is important to bear in mind the following points:

1. The device of insurance cannot, of itself, alter the total dollars available for the program. This means that fees for services performed, the scope of services covered by the program and the adequacy of the funds will be unchanged by the participation of an insurer. Only to the extent that administrative expenses might be affected would the funds available for medical services and supplies be changed.

2. Determination of the benefit formula, level of fees and scope of services covered would continue to be the responsibility of the Department of Social Welfare even though an insurer were involved.

3. The primary function of the insurer would be that of an administrator and, possibly, technical adviser. It would not function as an arbiter.

4. Because final responsibility and control would remain with the Department of Social Welfare, it seems unlikely that the insurer would be able to accept the risk as to the adequacy of the funds. The insurer would probably administer only and the premium would be determined as the claims paid by the insurer plus an administrative charge—an arrangement sometimes referred to as 'Cost Plus.'

"There would appear to be some advantages as well as disadvantages of using an insurer as administrator. At present we see the following advantages:

1. May further remove the 'charity' stigma.

2. The medical profession may consider it more palatable to deal with an insurer than with a welfare agency.

3. Use of private instead of government facilities wherever possible in providing medical care may result in less pressure for direct government intervention.

4. It is possible that the insurer could provide some technical assistance in future planning in the area of such items as statistical studies.

"Among the disadvantages of using an insurer are:

1. Its position (lack of responsibility for and authority to determine benefits, fees, etc.) may be misunderstood and result in dissatisfaction on the parts of both doctors and recipients.

2. May result in overlapping of records and extra procedures since the state agencies will still be deeply involved.

3. Unless special arrangements can be made or special legislation passed, an insurer would have to pay a tax to the state of 2 per cent of premium. Since the funds come from the federal government, this would result in diversion of a portion of the funds for other than medical care.

"As indicated at the outset, we feel that it is impossible to arrive at definite conclusions based on the review we have made so far. We are not in a position to speak for the industry and, at present, do not believe that we can even give a clear indication of whether Bankers Life would be interested in administering such a program.

"If additional study is desired, we would be glad to work further with the interested parties in order to determine more clearly whether participation of an insurer would be practical."

3. *Utilization of Blue Shield:* The utilization of commercial insurance minimizes the threat of governmental domination of the practice of medicine by introducing a private insurance carrier into the doctor-patient picture. The insurance payments would necessarily be indemnity which would go to the patient and might not be received by the physician.

The one advantage of using Blue Shield in lieu of a private insurance carrier would be the utilization of the medical service aspects which are exclusive with Blue Shield. The State Department of Social Welfare is willing to consider administering the program through Blue Shield, if acceptable details can be worked out. The Department, however, takes the position that Blue Shield should cover vendor payment services not only of medical doctors but also those of osteopaths, chiropractors, and dentists, as well as drug costs, and home and office calls not currently covered by regular Blue Shield policies.

The problem, as stated by Iowa Medical Service, is as follows:

"The question to be solved is, whether or not Blue Shield could write insurance coverage for medical care and other services furnished such recipients. Based on the literature furnished us, it would seem that the following services would require coverage by insurance:

1. Outpatient medical and surgical care. This would include payment to physicians, consultants, osteopathic physicians, chiropractors and chiropodists.

2. Drugs—furnished by physicians or druggists.

3. Certain outpatient services rendered by the outpatient departments of hospitals to include x-ray and laboratory tests.

4. Medical supplies.

The list furnished includes some 19 items as typical of those to be furnished.

"It is certainly within the realm of possibility to develop insurance coverage for the major components mentioned above. This would require some careful calculations on items not commonly insured. Under the legal structure of Blue Shield at this time, the following items would require special consideration and/or arrangements and are without precedence in the Blue Shield operation.

1. Payments of chiropractors and chiropodists.

2. Payment for drugs when furnished to an outpatient.

"I trust this will assist you in drawing conclusions in this possible coverage. There are many administrative enigmas to be solved were the above to receive approval by the Board and Insurance Commissioner.

"First and foremost would be a determination of a total list of eligibles with an overall inclusion of all. Second, the problem of eligibility, non-eligibility and return to eligibility based on condition, income, etc., of the subscribers. Third, agreement on fee schedules and cost of drugs and supplies.

"These are some of the items that would require a negotiation agreement and careful analysis."

Your Committee on Legislation feels that it has explored the utilization of Blue Shield and commercial insurance to as great an extent as the situation warrants. Because of the magnitude, difficulty, and expense of this task, it is questionable whether either angle should be pursued in greater detail without more specific authorization from the House of Delegates. Your Committee believe that these are possible solutions to some of the difficulties in the present Vendor Payment Program that appear promising and that can be further explored if this House desires.

As the final portion of the Supplemental Report

of the Committee on Legislation, I would like to call on Dr. R. L. Wicks to present recommendations of the Inter-Professional Adoption Study Committee. This Committee, consisting of five ISMS members and representatives of the Iowa Bar Association and the Iowa Association of Children's Agencies, has been meeting for 18 months studying needed changes in adoption procedure. Their report has been made to the Committee on Legislation for information, and we would like their recommendations made a part of this Supplemental Report for consideration by the Reference Committee and this House.

N. W. IRVING, M.D., *Chairman*

As Dr. Irving had requested, the privilege of the floor was granted to Dr. Ralph Wicks, who presented a report on behalf of the Adoption Study Committee. It, too, was referred to the Reference Committee on Legislation and Public Relations.

ADOPTION STUDY COMMITTEE

The medical section of the Inter-Professional Adoption Study Committee makes the following recommendation to the Iowa State Medical Society:

(1) That a permanent Inter-Professional Adoption Study Committee be set up to discuss further the complex problems related to the field of adoption, to communicate new ideas and information arising in various fields related to adoption, to provide a permanent organization to discuss changes and new problems in this field, to communicate this information to its various organizations and to make recommendations to the Legislature.

(2) The following recommendations are made regarding statutory changes:

(A) There should be separation of the "release of the child" and "adoption of the child," so that there will actually be two phases in a adoption.

(B) It is further recommended that when a child has been duly released to a licensed child-placing agency, procedures be available on an optional basis whereby the agency having custody of the child may institute court proceedings serving notice on the natural parent of the child who has not released the child and ordering him to show cause, if any, why such child may not be placed for adoption by others. Under present law, in Chapter 600 of the Code of Iowa, this notice is not given and the hearing does not take place until the very time of the hearing on the adoption decree. It is felt that this issue should be disposed of prior to the placement of the child in the adoptive home. (It is recommended that the two statutory procedures above referred to be incorporated into Chapter 238 of the Code of Iowa, and that necessary amendments be made to Chapter 600 to give recognition thereto.)

(3) It is abundantly clear that pre-placement investigation—that is, a careful investigation of all parties involved in the adoption—is of utmost importance. All possible steps to increase the use of this procedure should be taken.

(4) The present statutes in Chapter 600 of the Code of Iowa are subject to the interpretation that where a licensed child-placing agency has placed a child in a prospective adoptive home, the court must appoint some party other than that agency to make the formal adoptive investigation. The Committee believes that such procedure is an unnecessary duplication of work, and recommends sufficient statutory change to make it clear that the court may appoint as investigator, the licensed child-placing agency which has placed the particular child in the adoptive home.

(5) "Qualified Investigator"—the apparent lack of qualified personnel does not, today, permit the setting forth of absolute statutory standards as to who is a qualified investigator to make an adoptive investigation. However, close cooperation between the Bar Association and Medical Society and the social agencies could result in furnishing to the judges a list of investigators best qualified in each particular county and judicial district. In this manner, the courts could be assured of having the best investigating services available.

(6) An early investigation in an adoptive matter is good practice. Our statutes should be amended to require the filing of a petition for adoption within 90 days after the child first comes into the adoptive home and the ordering by the court of investigation immediately upon the filing of a petition in all cases, both private placement and agency placement. Where the placement has been made by other than a licensed child-placing agency, the filing of a consent by the agency ought to be permitted at any time up to one year after the placement of the child in the home. This recommendation is made since it is the current practice of most, if not all, such agencies in this state to place a child in a prospective adoptive home for a one-year probationary period before the agency finally consents to adoption. It is further recommended that no decree of adoption be issued for one year after the filing of the petition, except for good cause shown. By the early filing of a petition for adoption and the immediate ordering of investigation, it would no longer be necessary to put a 60-day limit on the investigation, and it is recommended that the limit of time for making investigation be considerably enlarged so as to permit as thorough an investigation as the facts seem to require.

(7) The problem of "privileged communication," as regards the work done in an adoptive study by the social agencies, needs careful consideration. At the present time, there is no statutory protection for these agencies, and the Committee recommends further study on this subject.

There is a deficiency of funds and facilities at the present time both to take care of the unwed mother and to provide adequate care for the child released for adoption. Careful exploration of proper means of obtaining the additional funds should be undertaken.

(8) In the field of private adoptions versus agency adoptions, there is no uniformity of opinion by this Committee. The medical section, at this particular time, recommends no change in this phase of the adoptive practices.

(9) A more detailed report, representing the findings of the entire Inter-Professional Adoption Study Committee, consisting of representatives of the social agencies, the Iowa State Medical Society, and the Iowa State Bar Association, will be attempted at a later date.

R. L. WICKS, M.D., *Chairman*

MEDICO-LEGAL COMMITTEE

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

Since publication of this Committee's report in the HANDBOOK, a meeting has been held with a representative from Marion County regarding the Anti-Nuisance Suit Resolution now under study by the Committee.

As directed by the 1959 House of Delegates, the Medico-Legal Committee has researched the Marion County Resolution on Anti-Nuisance Suits very thoroughly. Letters were written to Mason Ladd, dean of the State University of Iowa Law School, and to Martin Tollefson, dean of the Drake Law School, asking them to review the Marion County Resolution on an over-all basis and to submit their opinions of the resolution. Both deans felt that their respective schools would not be able to take on the responsibility of such a project and suggested that the Committee write the editor of the IOWA LAW REVIEW for an opinion. The editor of the LAW REVIEW responded, stating that the problem of deterring law suits against members of the medical profession was not appropriate subject matter for his publication.

The Committee next wrote to Mr. Carl Conway, president of the Iowa State Bar Association, who advised us to discuss the subject with Mr. Ed Jones, secretary of the Iowa State Bar Association. We then sent to Mr. Jones a copy of the letter addressed to Dean Ladd as well as a copy of a memorandum "Provisions on Vexations Litigation and Legal Aid in Various European Countries," in an effort to ascertain what might be the position of the Iowa State Bar Association with respect to this proposal. Mr. Jones has informed us that our letter and accompanying material has been referred to Mr. E. W. McNeil, chairman of the Scope and Correlation Committee of the Iowa State Bar Association. We have been assured that after consideration and study in this Committee, and subsequent report to the ISBA Board of Governors, that Mr. Jones will advise us.

It is the feeling of the Medico-Legal Committee that there is merit in such legislation, but at present we are unable to make any formal recommendation until a report is received from the Iowa State Bar Association.

The Committee feels that if legislation to discourage all insincere and vicious nuisance litigation is introduced in the next Iowa Legislature, it would be well for the Iowa State Medical Society to give such legislation whatever assistance is deemed practical.

V. C. ROBINSON, M.D., *Chairman*

COMMITTEE ON ARTICLES OF INCORPORATION AND BY-LAWS

(Referred to the Reference Committee on Articles of Incorporation and By-Laws for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

The House of Delegates, in session April 22, 1959, directed the Committee on Articles of Incorporation and By-Laws "to study the question and present at a later date to the House of Delegates a plan by which the dean of the College of Medicine of the State University of Iowa would be a member of the Iowa State Medical Society's House of Delegates without vote." This recommendation was considered by the Committee, and was approved by four of the five members, with one dissenting. Therefore, the Committee proposes adoption of the following amendment to accomplish the request of the House of Delegates.

Resolved, That Article VI, Section 1, of the Amended and Substituted Articles of Incorporation of Iowa State Medical Society, as amended, be amended by striking therefrom the fifth sentence thereof and substituting in lieu thereof the following:

"The officers of the Society as defined in these Articles, the past presidents of the Society for the immediate five previous years, and the dean of the State University of Iowa College of Medicine, shall be, ex officio, members of the House of Delegates without the right to vote unless that officer, past president, or dean be at the same time a duly-elected delegate."

The Committee, on invitation of the Board of Trustees, also considered the question of whether or not there would be any advantage in changing the name of the ISMS to eliminate confusion in the minds of the public about whether the Medical Society is a tax-supported, state institution. It is acknowledged that misunderstanding does exist in this regard, but the extent to which it exists has not been determined nor has it been ascertained whether the public-relations return in clarifying this matter would be of greater value than the work and expense involved in making a change. The Committee knows that other state medical societies have changed their names to eliminate reference to state, as have other associations in Iowa such as the dentists, nurses, etc. The Committee prefers not to recommend approval or disapproval of a change in the Society's official name, but recommends that an appropriate committee be asked to study the ramifications of this proposal and report its findings to the House of Delegates in 1961.

P. F. CHESNUT, M.D., *Chairman*

Supplemental Reports of Special Committees

POLICY EVALUATION COMMITTEE

(Referred to the Reference Committee on Insurance and Medical Service for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

After a one-year study, your Policy Evaluation Committee has submitted for your consideration a SUMMARY of its Blue Shield studies, a copy of which is in your packet. The members of this committee are: Wayland Hicks, M.D., urology; Lee F. Hill, M.D., pediatrics; John MacGregor, M.D., surgery; Henning Mathiasen, M.D., general practice; Cecil Seibert, M.D., ob. and gyn.; Herman Smith, M.D., internal medicine; Samuel Leinbach, M.D., general practice; George Wyatt, M.D., radiology; and ex officio members John Billingsley, M.D., president, and Eugene Van Epps, M.D., president-elect.

I wish to thank the members of this Committee for the time and effort which they have put into the study of Blue Shield. I am sure we all agree that solutions to all of the Blue Shield problems are not easy to arrive at.

The final Progress Report Summary was edited by four members of the Committee. I would like to quote

for you the final paragraph submitted by our ever-wise member, Dr. Herman Smith. This paragraph so well summarizes our dilemma: "Almost all of the representatives of the various specialties and generalist groups who appeared before the Committee addressed their comments to specific 'gripes' concerning Blue Shield fees and coverage in their own fields. The profession should be strongly urged to take a less selfish and narrow point of view, and to address itself to the more fundamental questions underlying the current controversy.

A. Does the medical profession have a particular obligation to provide medical care for any special under-privileged, or low-income groups of the population?

B. If so, is Blue Shield the best agency for implementing this service?

C. If not, what are the alternatives?

D. Should doctors get out of the non-profit insurance business and leave the field to the commercial carriers?

If these questions are resolved in favor of continuing Blue Shield, then, and only then, is it profitable to continue the debate regarding the mechanisms and limitations of policy coverage and physician participation."

Our studies during the course of the next twelve months, to be reported to this House at its regular meeting in 1961, should provide answers to the questions posed by Dr. Smith. I would like to request that the Policy Evaluation Progress Summary as published in the April, 1960, JOURNAL, and as included in your packets, as well as this supplemental report, be referred to the proper reference committee.

In conclusion I would like to present Dr. Earl C. Lowry, president of Iowa Medical Service, who will bring you up to date on some current Blue Shield matters.

WENDELL L. DOWNING, M.D., *Chairman*

CURRENT BLUE SHIELD PROBLEMS

Complying with the request of the House of Delegates of the Iowa State Medical Society in 1959, I shall try to give you a progress report on the Blue Shield Senior "65" and middle income contracts (B"400"). Following the meeting at which the request was made for this report, we received much mail from physicians and Blue Shield subscribers, and inquiries from newspapers and other sources. Some of the physicians were unhappy with the promulgation of these two contracts.

Since January 1, 1959, 235 participating physicians have resigned—201 immediate resignations and 34 effective in one year from date of notice. During the same period of time 109 new physicians have become participants in Blue Shield. Of the ones resigning, 15 have rejoined.

We have made a careful analytical study of every letter received containing either a resignation or recommendations about and/or objections to the Blue Shield efforts. Objections raised to the Blue Shield operation may be summarized as follows:

1. Contentions that fee schedules are too low and coverage inadequate.
2. Objections to the service principle.
3. Comments pertaining to comparative services of the respective specialties, such as the absence of a dual fee schedule for specialists and GP's.
4. Observations that the Blue Shield operation as a third party is interfering with the doctor-patient relationship.

The Senior "65" Contract. Following the development of the Senior "65" contract and its approval by the Commissioner of Insurance, it was placed on sale May 20, 1959. A total of 7,787 contracts have been sold. No Senior "65" contracts were sold in the area served by the Sioux City Blue Cross Plan. You will recall that these are all single contracts. There remain in effect March 31, 1960, 6,768 contracts. There have been cancellations, deaths and other reasons for terminations. Up to the present time, March 31, 1960, a liability of approximately $87,800 has been incurred for physician services.

I cannot refrain from remarking on the tremendous amount of goodwill this program generated among the aged population. This statement is based on mail received from the subscribers and their relatives. I would like to quote from a letter received February 26, 1960, from a daughter of one of the subscribers after the death of her mother.

"I want to thank you for the help the Senior '65' gave my mother. She was so happy to have the policy and it gave her assurance that medical expenses would not be beyond her reach. It gave her peace of mind for 9 months that she would not have had otherwise. I shall always be grateful we had the policy."

Similar comments have been received from numerous subscribers themselves.

You will recall that in the implementation of the Senior "65" program, an effort was made to have a fee schedule which would be comparable to our other Blue Shield fees. In view of the fact that legal requirements necessitated that this policy stand on its own feet, the fee schedule was adjusted in accordance with the maximum premium believed available. In the meantime, we have found it possible, without an increase in premium rate, to amend the fee schedule and make it identical to that of the B"300" contract. This change became effective on April 15, 1960. This has been accomplished in consonance with the efforts and study of the Policy Evaluation Committee. It is of interest statistically that this change should alleviate more than 60 per cent of the complaints we have received.

In summary, the Senior "65" program has proved very effective in filling a void—the health needs of this particular segment of the aged—and the persons concerned are grateful.

The B"400" Contract. Following the last meeting of the House of Delegates, the B"400" contract was implemented June 1, 1959. We were a little tardy in commencing sales in that we did not have simultaneous implementation of both contracts. Since it has been on sale, 5,724 contracts, covering approximately 14,500 persons, have been sold. Payments to be made under this contract in ten months will total approximately $102,454. You will note that the physicians' medical and surgical benefits under this contract are 33 per cent more than the B"300" allows for the same services.

This contract has proved a valuable addition to Blue Shield's armamentarium. From what the sales force tell me, it is my understanding that the people man-

ifest a greater interest in this contract, perhaps, than in any other on sale. Persons above the service income limit are happier because of the greater payment toward their total expense. Obviously, those under the service limit have the same feeling that any subscriber has under any policy which pays his account in full. From the best information we can gather, it would appear that the physicians in general are happy with the payments under this contract; there have been very few complaints.

It appears to me, considering all factors concerned, that if this policy were withdrawn from the market, a death blow would be dealt to the Blue Shield operation.

Summary. It would appear that in the overall evaluation of medical practice there are four factors influencing medical or total expenses. They are:

1. Physicians.
2. The insurance industry.
3. The government.
4. The people.

Time will not permit me to develop fully the role of each as it currently influences medical practice. Suffice it to say that more and more of our people find it absolutely essential that they budget for their medical care on a monthly payment basis. Blue Shield is the mechanism through which physicians exert influence on the entire range of voluntary health agencies. This is accomplished through the development of policies and fee schedules, and through friendly competition with the private insurance industry. In any level of the population where distress occurs, whether it be the young or the old, and wherever services cannot be had by the voluntary methods, the people seek relief through their elected representatives. The addition of the Senior "65" contract and the B"400" contract, in my view, has filled an important request of the people for assistance, and thus the contracts have been good for physicians.

COVERAGE FOR FEDERAL EMPLOYEES

Public Law 382 (86th Congress) provides funds for federal employees to purchase health coverage at their local level. This will cover over 2 million federal employees, 16,000 of whom live in Iowa. Of these 16,000, 6,000 now carry Blue Cross and Blue Shield coverage. Iowa Medical Service finds itself one of four states unable to participate in this program while both of our companion Blue Cross plans, in Des Moines and Sioux City, can participate. The reasons are that we do not meet the service level requirements and cannot sell primary indemnity programs.

Under the government program, two contracts must be available: one which furnishes a service level of $4,000 per annum, per family, and one $6,000 per annum, per family. Incidentally, this will cover approximately 50 per cent of the federal employees—not quite 50. We are short, on the first, by $400 per family, per annum, and the latter by $600 per family, per annum.

I can report that our 6,000 subscribers in Iowa are genuinely disturbed over this situation. Further, almost daily we encounter similar difficulties, when such firms as General Motors, Ford and others try to insure their employees in Iowa in their home state groups. In this instance the government is an employer desiring to purchase our local coverage to be paid at our current fee schedules. It would seem highly desirable for this House of Delegates to consider seriously the inevitable alternative which will result by our not participating in this federal program.

In summary, Blue Shield is a proper mechanism through which physicians can and may speak in meeting the health needs of the people. Through this mechanism they indirectly influence and affect benefits, policies and procedures by commercial carriers.

History reveals that pressure is brought for government assistance when a void occurs in fulfillment of needs by voluntary agencies. The Senior "65" program has filled such a void. The B"400" contract has restored to subscribers, in part, the level of benefits given them when the $3,600 level was established at the beginning of Blue Shield.

EARL C. LOWRY, M.D.

COMMITTEE ON INDUSTRIAL HEALTH

(Referred to the Reference Committee on Insurance and Medical Service for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

The Committee on Industrial Health has completed its review of the entire area of "free choice of physician" under the present Iowa Workmen's Compensation Laws.

Section 85.27 of the Code of Iowa, 1958, requires:

"The employer, with notice or knowledge of injury, shall furnish reasonable surgical, medical, osteopathic, chiropractic, chiropodial, nursing, and hospital service and supplies therefor."

This section has been interpreted by the Industrial Commissioner, the officer responsible for the administration of workmen's compensation laws, as allowing *the employer* to select the medical and other services tendered, so long as the tender is in good faith and is reasonable.

An amendment to this section of the Code was proposed at the last session of the Iowa Legislature and, if passed, would have allowed unrestricted choice of physician by the employee. Although this amendment was not passed, it will, no doubt, be an issue in future sessions of the Legislature.

As reported in the HANDBOOK, your Committee has held meetings with the Industrial Commissioner of Iowa, officers of the Iowa Federation of Labor, and representatives of management and the insurance industry. Attempts were made to meet with Mr. Lex Hawkins, a Des Moines attorney who had expressed an interest in the Committee's exploration of this subject. However, Mr. Hawkins was unable to make arrangements to meet with us. It would be useless for the Committee to attempt incorporating in this report all the reasons given, both pro and con, with regard to "free choice" under workmen's compensation. We shall attempt, however, to summarize the views presented.

Many labor representatives feel that they should have free choice of medical service to ensure the employee confidence in his treating physician. It is labor's opinion that the employee is in a better position to pick a physician than is the employer and, therefore, labor objects to the workers' being told

which physicians shall treat them. Although no specific instances of abuse of the present Law could be cited, it was labor's viewpoint that the principle involved was serious enough to warrant a change.

The prime reasons given for the employer's retaining the right for designation of medical treatment were as follows:

1. The employer is interested in keeping his medical costs at a minimum.

2. The employer is interested in returning the patient to his job as soon as possible and with the least disability.

3. Under Iowa law, claims from other professions (osteopathic, chiropathic, chiropodial) must be honored. Therefore, under a "free choice" system, costs would rise when the employee failed to make an intelligent choice of medical treatment.

In addition to the meetings that it has held, the Committee has reviewed and studied voluminous material from other states concerning this same problem. We, therefore, submit the following information which we believe outlines the reasons for the Committee's recommendation.

The prevailing policy throughout the United States is to give employers pre-option, either in selection or in supervision, or in both, in the matter of physicians and medical care. The first reason for this policy is that point of obligation and responsibility. Since the employer is economically and legally bound for the cost and results of the care, the selection, in the first instance, should be with the employer.

Most employers are not opposed to supervised or bilateral selection of a physician to treat the employee. However, in many cases, the rehabilitation of the injured worker and his return to employment constitute an undertaking which may be beyond the knowledge and skill of the personal physician or the family doctor, regardless of how skilled he may be in many other phases of medical science. Prolonged therapy and delayed rehabilitation can only add to the cost of this program.

The Committee does suggest that when practical, employers be encouraged to make available a listing of at least two individual physicians in instances where special treatment is required.

For reasons of efficiency and availability, the injured employees are given their first attention by a plant physician. Doctors in industrial medical departments have had special training and experience in handling workers who have been injured or who have occupational diseases. They have first hand information about the place where the injury occurred and about the working environment that may have produced the disease. They realize how important it is that the employee be returned to his job as soon as possible.

In Iowa, there has been little complaint about the quality and the results of treatment under the present Code. If there is an urgent need for a change in the law, it would have to arise from a real complaint about the present system. The Committee questions the existence of any basic problem, or one of significant magnitude that would justify any change in the Iowa law.

Widespread support for supervisory selection of physicians by the employer is best exemplified in the heavy preponderance of states which authorize and follow this principle. (See attached chart.)

Accordingly, it is the unanimous opinion of the Committee on Industrial Health that, in the area of "free choice of physician," there is no demonstrable reason for any amendment to the present Iowa Workmen's Compensation Laws.

C. J. JOHNSTON, M.D., *Chairman*

SELECTION OF DOCTOR
UNDER STATE WORKMEN'S COMPENSATION LAWS

State	*Choice by Worker*	*Choice by Employer or Insurance Carrier*	*Change May Be Ordered by W. C. Agency*
Alabama		*	
Alaska		*	
Arizona	*		*
Arkansas		*	*
California	*[1]		
Colorado		*	*
Connecticut		*	*
Delaware		*	*
District of Columbia		*	
Florida		*	*
Georgia		*	*
Idaho		*	*
Illinois		*	*
Indiana		*	*
Iowa		*	
Kansas		*	
Kentucky		*	*
Louisiana		*	
Maine		*	
Maryland		*	
Massachusetts	*		
Michigan		*	
Minnesota	*		*
Mississippi		*	
Missouri		*	*
Montana	*		*
Nebraska		*[2]	*[2]
Nevada		*	*
New Hampshire	*		
New Jersey		*	
New Mexico		*	
New York	*[2]		
North Carolina		*	*
North Dakota	*		*
Ohio	*		*
Oklahoma		*	*
Oregon	*		*
Pennsylvania		*	
Rhode Island	*		
South Carolina		*	*
South Dakota		*	
Tennessee	*[4]		
Texas		*	*
Utah		*	*
Vermont		*	
Virginia		*	*
Washington	*		*
West Virginia	*		
Wisconsin	*[5]		*
Wyoming	*		
Hawaii	*		*
Puerto Rico		*	*

[1] On request from list of three nominated by employer.
[2] Employee may select for dismemberment or major operation.
[3] From panel authorized by the Workmen's Compensation Board.
[4] From panel of three nominated by employer.
[5] From panel named by employer.

COMMITTEE ON RURAL HEALTH

(Referred to the Board of Trustees for study and recommendation. For final action by the House of Delegates, see the report of the Board of Trustees convened as a reference committee.)

Some months ago, this Committee suggested to the

Board of Trustees that an exploration be made of a survey of the towns in the State of Iowa with respect to the problem of doctor shortage or doctor distribution.

The Board directed that such an exploration be made. The Institute of Agricultural Medicine of the State University of Iowa was first approached by members of the staff, and as a result of this initial approach, they held three meetings with personnel of the Institute of Agricultural Medicine and the SUI Departments of Sociology, Geography, and Business and Economic Research.

The outcome of these exploratory discussions was agreement that information already available in the files of the State Society and SUI's Urban Research Center, Bureau of Business and Economic Research, Institute of Agricultural Medicine, and other departments would be extremely valuable, but that additional data should be collected through a state-wide survey of towns in the category where the problem may be present.

The purposes that would be served by the survey would be three-fold. (1) It would be done by professional investigators and statisticians, and thus it would have much more weight than if done by the State Society or the College of Medicine. (2) It would provide norms within which the ISMS Placement Service would be able to encourage towns as to their chances of obtaining and holding one or more doctors. (3) It would provide information which would be useful either in justifying requests to the Legislature for more funds for the medical school or in clarifying in the minds of the public the facts on a possible doctor shortage, or improper distribution.

Credit should be given to the Institute of Agricultural Medicine for correlating this exploration. Its proposal presented to the ISMS Board of Trustees on April 13 is as follows:

A sociology graduate student and a geography graduate student would be assigned half-time for one year to work on the project through questionnaires and visitations. These students would use the project as material for their doctoral theses.

Included at no cost would be important items such as supervision by and consultation with senior staff members of the Departments of Sociology and Geography, consultation with staff members of any and all other SUI departments and organizations that might be helpful, and secretarial requirements.

Beyond this, the cost has been estimated on two bases, the austere basis totaling $5,125 and the minimal basis totaling $7,350. No department of the State University of Iowa has funds for such a purpose.

Dr. F. H. Top, director of the Institute of Agricultural Medicine, expressed a willingness to consult with a field representative of the W. K. Kellogg Foundation to explore the possibilities of securing these funds. No commitment could, of course, be made as to the success of such an exploration.

We understand that the ISMS Board of Trustees is inclined to favor such a project, especially if funds can be secured from a foundation. Time is of the essence, and your Committee recommends that this project be adopted and implemented as rapidly as possible, the reason being that assignment of graduate students for next year's projects is almost completed and in order to make assignments for next year, they would have to start this summer. Even if funds were secured from the Kellogg Foundation, there would be no actual money available until the first of September. Your Committee would suggest to the Board of Trustees that perhaps if the Kellogg Foundation offered a grant, the ISMS might provide an advance of funds to be used during the summer, to be repaid to the Society out of Kellogg Foundation funds on or about September 1. Another reason for an immediate decision is that all requests for next year's funds must be in the hands of the Kellogg Foundation by May 1.

On the basis of such a survey, the ISMS placement service could say to a town requesting a doctor either, "You have a good chance of securing and holding one or more doctors," or at the other extreme, "Our information indicates that towns in your category will probably not be able to secure or hold a physician or team of physicians." It would enable the placement service to put its efforts where chances of success would be the greatest. It would eliminate the bad public relations resulting from the listing of a town, implying possibilities of success but followed by an elapse of months and months with no results.

Your Committee on Rural Health strongly urges the participation of the Iowa State Medical Society in such a project if the Board of Trustees feels that the necessary financing arrangements can be provided, either through an outside foundation or by direct appropriation of Society funds.

J. W. GAUGER, M.D., *Chairman*

RELATIVE VALUE STUDY COMMITTEE

(Referred to the Reference Committee on Insurance and Medical Service for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

We are sure that each member of the House of Delegates is well aware of the main project undertaken by the Relative Value Study Committee during the past year. The Committee is pleased to submit the following progress report.

The first letter concerning the Relative Value Survey was mailed on February 25, 1960. Since that date, seven separate mailings having been made, including letters to explain the Survey, the mailing of the actual questionnaires (2,293), and follow-up letters to obtain the maximum participation possible.

As of April 21, 1960, approximately 65 per cent, or 1,489, of the questionnaires have been returned to the State Society office. Continued efforts will be made to get those physicians who have not replied to complete and return their questionnaires. Attached to this report is a list of the County Medical Societies and the number of questionnaires mailed to and returned from each county.

During the coming year, the results of this Survey will be tabulated, studied and reviewed by the Committee and specialty groups. They will then be organized and prepared for final report to the 1961 House of Delegates.

The Committee has copies of a publication, "Questions and Answers About Relative Value Studies," which answers clearly and concisely some of the basic questions concerning relative value studies. We shall be glad to provide one to every interested doctor, and we urge everyone to read this pamphlet carefully.

FRED STERNAGEL, M.D., *Chairman*

RELATIVE VALUE SURVEY

County Society	Number of Surveys Mailed	Number Returned As of April 21, 1960
Adair	4	3
Adams	4	3
Allamakee	7	6
Appanoose	11	6
Audubon	4	1
Benton	15	7
Black Hawk	109	82
Boone	16	10
Bremer	15	12
Buchanan	15	8
Buena Vista	13	5
Butler	7	5
Calhoun	12	8
Carroll	21	14
Cass	10	5
Cedar	9	4
Cerro Gordo	64	48
Cherokee	18	11
Chickasaw	10	8
Clarke	6	1
Clay	12	10
Clayton	11	7
Clinton	46	36
Crawford	7	6
Dallas-Guthrie	25	14
Davis	14	5
Decatur	6	3
Delaware	8	6
Des Moines	42	24
Dickinson	10	2
Dubuque	72	38
Emmet	14	9
Fayette	20	11
Floyd	17	10
Franklin	8	6
Fremont	6	3
Greene	15	9
Grundy	8	8
Hamilton	13	7
Hancock-Winnebago	14	9
Hardin	20	7
Harrison	8	5
Henry	16	11
Howard	8	4
Humboldt	8	6
Ida	6	5
Iowa	11	6
Jackson	12	8
Jasper	19	10
Jefferson	11	0
Johnson	164	106
Jones	14	11
Keokuk	6	5
Kossuth	9	5
Lee	36	19
Linn	127	64
Louisa	2	2
Lucas	6	1
Lyon	6	5
Madison	7	6
Mahaska	19	9
Marion	15	9
Marshall	36	27
Mills	5	3
Mitchell	10	6
Monona	10	8
Monroe	6	2
Montgomery	12	6
Muscatine	22	14
O'Brien	12	5
Osceola	4	1
Page	20	12
Palo Alto	9	5
Plymouth	11	10
Pocahontas	8	5
Polk	287	177
Pottawattamie	70	67
Poweshiek	9	4
Ringgold	2	2
Sac	8	7
Scott	106	77
Shelby	8	5
Sioux	11	6
Story	49	37
Tama	12	10
Taylor	3	2
Union	14	8
Van Buren	3	2
Wapello	52	24
Warren	8	7
Washington	12	9
Wayne	6	5
Webster	54	37
Winneshiek	10	4
Woodbury	118	60
Worth	4	1
Wright	19	8
No county checked		46
Total	2,293	1,489

MD/DO LIAISON SUBCOMMITTEE

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

Folowing a request by the Iowa Society of Osteopathic Physicians and Surgeons to discuss health matters of mutual interest, the Executive Council approved the formation of a Liaison Committee. President Billingsley appointed the following to the Committee: J. M. Rhodes, M.D., Pocahontas, chairman; T. E. Shea, M.D., Storm Lake; W. A. Seidler, Jr., M.D., Jamaica; Robert N. Larimer, M.D., Sioux City; and Homer E. Wichern, M.D., Des Moines. This Committee has met on two occasions with a committee of ISOPS composed of: Ralph Jack, D.O., Ogden, chairman; Clive Ayers, D.O., Atlantic; James Lott, D.O., Clarion; Roger Anderson, D.O., Sioux City; and Harold Meyer, D.O., Sioux City.

Subjects under discussion have been: shortage of physicians; methods of practice of the two professions; composite board of examiners; education and accreditation of schools; hospital relationships; and ethics and disciplinary problems. The informal discussions have been characterized by frank and informative statements from both sides of the table.

It would appear that the osteopaths favor a composite licensing board which would necessitate changes in their practice act. To justify this, they point out that several states have composite boards of licensure, and in exams given by these, the osteopaths do as well as the M.D. graduates. The younger osteopaths do not seem to emphasize manipulation as the principal modality of treatment, probably because the Des Moines College now contains only two 3-hour courses in manipulation in its entire 4-year curriculum. Those osteopaths who claim mysterious or "unscientific" results from manipulation are discredited by their own group. On the other hand there is reluctance to give up the existence of the "osteopathic lesion," or adequately to explain it, and research continues in an effort to prove it.

The osteopaths seem intent in strengthening their schools, and would like to employ M.D. teachers. However, this is unethical from the M.D. viewpoint

unless the osteopathic college is in the process of being converted to a medical school. This in turn would require evaluation and provisional accreditation by the AMA Council on Medical Education and Hospitals. The osteopaths understandably have not committed themselves on these issues, but do show definite interest in the mechanism of AMA accreditation.

Your Committee hopes to continue to serve the Society by learning more about the ultimate goals of osteopathy, discussing mutual problems, and reconciling differences within the limits of medical ethics. It is recommended, therefore, that the Committee be continued. Recommendations from the House of Delegates regarding the scope and direction of the Committee will be welcomed. The Committee wishes to thank Mr. Robert Throckmorton, legal counsel, and Mr. Julian Serrill, staff secretary, for valuable assistance.

J. M. RHODES, M.D., *Chairman*

CHIROPRACTIC COMMITTEE

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

The Chiropractic Committee held one meeting during the year. After a general review of the chiropractic sphere, the containment policy adopted by the ISMS was considered to be sound. It was necessary, however, for this Committee to investigate the possibility of a coalition between the "mixer" and "straight" groups of chiropractors in view of their joint efforts in an unsuccessful attempt to place a chiropractor on the health board. This investigation was reported to the Executive Council on February 28, 1960.

During this legislative movement, the two chiropractic segments were united in principle, but not in fact. No union of forces is anticipated unless definitive action is taken by the ISMS against the chiropractors.

The Committee is aware of legal activity by the chiropractors in this and other states in attempts to have hospital recognition by chiropractors as staff members and to have certain institutions classified as chiropractic hospitals.

It is recommended to the ISMS that the Chiropractic Committee be continued to study further the attempts of chiropractors to broaden the sphere of chiropractic methods, extending them beyond their present methods of manipulation.

R. A. BERGER, M.D., *Chairman*

IOWA MEDICAL MILK COMMISSION

(Referred to the Committee on Miscellaneous Business for study and recommendation. For final action of the House of Delegates, see the report of the reference committee.)

The Iowa Medical Milk Commission was appointed by Dr. Billingsley on September 8. Since that time it has held three meetings. Attendance, as a result of conflicts, was hardly sufficient to warrant definitive action in line with the Committee's prescribed purpose.

Because of the controversy created by the so-called "Arthritis Immune Milk," the Committee felt it advisable to study this problem. For the benefit of those who may be unfamiliar with it, it may be well to give a brief résumé of this product. "Immune Milk," developed by Professor W. E. Peterson, a dairy specialist at the University of Minnesota, allegedly gets its "immunity" to rheumatoid arthritis from antibodies produced in the udders of cows injected with streptococcus and staphylococcus vaccines. The patient theoretically gets his "immunity" or "cure" by drinking a quart of the milk a day. The problem came to Iowa by virtue of the franchising of a dairy in the northeastern part of the state which is labeling the milk as experimental and is giving it away only on the authority of a doctor's request. This company apparently wants someone or some agency to approve the product or to conduct research which will justify its claim so it can be merchandized.

Your Iowa Medical Milk Commission collected information from various sources which led to its adoption of the following statement:

"Immune milk" claims antibody content of therapeutic benefit. This claim, to be substantiated, would necessitate (1) substantiating the occurrence of the antibody content (2) establishing that, in fact, the antibodies are absorbed unaltered in content sufficient to be effective against the specific antigen (3) conducting controlled studies on sufficient numbers to provide conclusive evidence substantiating the therapeutic claims.

Until such time as answers are available to the above questions, immune milk cannot be classified as food and should therefore be subject to rules and regulations for drugs.

The members of the Commission are agreed that it would be a wonderful thing if claims for this product could be proved. They do not feel that either the Iowa State Medical Society, the State Department of Health, or any other authority of this level should be obligated to research the program so that proprietary concerns could profit therefrom.

Reports from the Arthritis and Rheumatism Foundation and reports of other studies to which we had access do not indicate any therapeutic benefit.

The chairman of the Iowa Medical Milk Commission realizes that the Commission has not yet fulfilled its original function, which was to determine the need to set up a procedure for certifying milk in Iowa. At an early date, this function will be considered by the Commission and a report will be made to the Board of Trustees.

However, since the methods and standards of Certified Milk are compatible with the rules and regulations for Grade "A" milk, there seems, in my opinion, to be little need for the promotion of Certified Milk in Iowa. Yet, I feel there is a need for the Iowa Medical Milk Commission to act in an advisory capacity, to maintain liaison between the Iowa State Medical Society and the Iowa State Department of Health and to study state milk laws for the purpose of making recommendations to eliminate the sale of ungraded raw and pasteurized milk and promote the sale of pasteurized Grade "A" milk.

E. G. ZIMMERER, M.D., *Chairman*

MEMORIALS AND COMMUNICATIONS

The secretary read a communication received from Dr. Lake Ludwig, chairman of the AMA Council on Medical Services, acknowledging Dr. Donald C. Conzett's contribution to the American Medical Association as a member of its Council on Federal Medical Services.

Resolutions

BOONE COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PLAN

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The various County Societies have temporarily tolerated the Vendor Payment Plan for fifteen months, and
WHEREAS, This County Society has studied the situation and concluded that local control is less, rather than more in effect today than at the time when the program was begun, and
WHEREAS, Indigent medical care was done more efficiently, and patients received adequate care at less cost to the taxpayer when administration was at a local level, and
WHEREAS, Differences in nature of problems in the various types of communities of the state make the program unsatisfactory when administration is at the state and national level, this practice constitutes a wedge into the field of medicine for socialistic practices, therefore be it
Resolved, That this Society is opposed to this plan until control is returned to the local, county level.

BUENA VISTA COUNTY MEDICAL SOCIETY

FEDERAL AND STATE MEDICAL AID PROGRAMS

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

Be It Resolved, That the Buena Vista County Medical Society, Inc., go on record as opposing any federal or state medical aid program such as the Forand Bill, the Vendor Medical Care Provisions, and the so-called Medicare Program, and be it further
Resolved, That the Iowa State Medical Society be requested to do all in its power to terminate federal and state level participation in any medical program for direct payment for medical care of indigent patients and that payment for medical care of all indigent patients be returned to the county level, and be it further
Resolved, That a copy of this motion be sent to the Iowa State Medical Society and to all county medical society secretaries in Iowa.

JEFFERSON COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

Be It Resolved, That the Jefferson County Medical Society urges that the ISMS make known to every society member the present status of the "renegotiation" of the vendor program, and be it further
Resolved, That a review of the aims of the ISMS in these "renegotiations" should likewise be forthcoming. We strongly urge that the ISMS leadership in the future not commit the individual physician to any form of government-controlled practice of medicine without his prior individual consideration and approval.

UNION COUNTY MEDICAL SOCIETY

CAMPAIGN TO STIMULATE INTEREST IN MEDICAL CAREERS

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The number of physicians we will predictably need for the future will very obviously be about 25 per cent more than we are now able to produce with available facilities, and
WHEREAS, Those now applying for medical school admission are becoming progressively less in number and overall of poorer quality than formerly, therefore be it
Resolved, That the Iowa State Medical Society through its component groups seek multiple ways of propagandizing the *need* for additional applicants of quality, and of the advantages of a medical life, and be it further
Resolved, That consideration be given to starting "future doctors clubs," and be it finally
Resolved, That we even try to interest our children of both sexes in a medical career.

UNION COUNTY MEDICAL SOCIETY

SUI MEDICAL SCHOOL DEPARTMENT OF MEDICAL ECONOMICS

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The average physician upon conclusion of his medical education hasn't the remotest idea nor knowledge concerning the economic problems that will face him in practice, and
WHEREAS, We feel that very much of the misunderstanding within the Medical Societies and between the profession and the public stems directly from the physicians' unschooled economic background, be it therefore
Resolved, That the Iowa State Medical Society recommend to the State University of Iowa School of Medicine, that consideration be given to the establishment of a Department of Medical Economics as part of the medical curriculum throughout the entire four-year span of medical education.

UNION COUNTY MEDICAL SOCIETY

CHANGE IN NOMINATING PROCEDURE

(Referred to the Reference Committe on Articles of Incorporation and By-Laws for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, February 15 is in the middle of the ice and snow period, and
WHEREAS, All of the eleven Councilor Districts surely ought to be guaranteed representation on the Nominating Committee, and
WHEREAS, It would be impractical for and work a hardship upon members serving the State Society as Secretary or Treasurer to be outside the county in which the headquarters of the Society is located, be it therefore
Resolved, That consideration be given to changing the date (February 15) in line 1, Chapter IV, Section 2, to March 1, and be it further
Resolved, that consideration be given to insertion of three sentences following the period in line 4, Chapter IV, Section 2 to read:
"An alternate delegate shall be elected from each Councilor District. He may sit with the nominating committee and assist in deliberations without vote. In the absence of the delegate to the nominating committee from his district he will be the acting delegate with vote."
and be it finally
Resolved, That consideration be given to changing the last sentence beginning after the period in line 22, Chapter IV, Section 2 to read "Except for the office of secretary and the office of treasurer, two candidates for the same office shall not be named from the same county."

DES MOINES COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PLAN

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Des Moines County Medical Society has had, for the past 30 years, a most cordial relationship with the Des Moines County Board of Supervisors in all matters pertaining to the medical care of the indigent poor, and
WHEREAS, The cost of giving this care, which has always been deemed satisfactory and entirely adequate by all parties concerned, even to the maintaining of a good physician-patient relationship, and
WHEREAS, Mr. Robert Flack has been summarily discharged by the State Department of Social Welfare from his position

as director of the Des Moines County Department of Social Welfare, the principal reason being given that he failed to produce a division in the ranks of the physicians of the Des Moines County Medical Society, thereby preventing the use of the new state or so-called Vendor Plan, and

WHEREAS, The Des Moines County Medical Society has always held the administrative abilities, personality and integrity of Mr. Robert Flack, director of the Des Moines County Department of Social Welfare, in the highest esteem, believing that he represents in the highest degree these necessary qualities, and

WHEREAS, The cost of such services per capita was 37.5 cents in Des Moines County, while in the neighboring counties in southeastern Iowa, to wit, Wapello, Lee, Van Buren, Henry, Louisa, Washington and Jefferson, the average per capita cost for the ten months operation under the State Medical Aid Plan was $1.19½, and

WHEREAS, The Des Moines County Medical Society deeply resents the invasion of the affairs of this County and the attempted intimidation of duly elected County officers by a bureaucratic-minded board of political appointees, whose next move will undoubtedly be to dictate how this medical care shall be performed, with complete disregard of the rapidly mounting expense assessed to the County, therefore be it

Resolved, That the Des Moines County Medical Society, at this regular meeting, April 1960, as it has a full legal right to do, rejects and condemns the state medical aid plan commonly known as the Vendor Plan.

LEE COUNTY MEDICAL SOCIETY

CHANGE IN NOMINATING PROCEDURE

(Referred to the Reference Committee on Articles of Incorporation and By-Laws for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, In 1958 there was put into effect an improved provision for Nominating Committee procedure embracing broad democratic principles, and

WHEREAS, Further modifications adopted in 1959, though well-meaning, have in actuality not only worked unnecessary hardships on delegates but also proved to be cumbersome and undemocratic, and

WHEREAS, It is not necessary to hold district caucuses in the winter when they can better be held in the spring, and

WHEREAS, Attendance at winter caucuses will frequently of necessity be poor, and

WHEREAS, To hold meetings of the Nominating Committee separate from meetings of the House of Delegates is truly undemocratic because it makes it necessary for Society members and delegates to leave their practices and travel to Des Moines if they wish to exercise their rightful privilege of making representations to the Nominating Committee, and

WHEREAS, Past experience has demonstrated that it is perfectly feasible for all of the business of the Nominating Committee to be transacted at the time of the annual meeting of the House of Delegates, now therefore be it

Resolved, That the following provision, patterned after the 1958 provision for Nominating Committee procedure, be substituted for Section 2 of Chapter IV of the By-Laws of the Iowa State Medical Society:

"Prior to each annual meeting of the House of Delegates, a caucus of the Delegates of his District shall be called by each District Councilor to elect a member and an alternate member to serve on the Committee on Nominations.

"The Committee on Nominations shall consist of eleven Delegates, one from each Councilor District. It shall have eleven alternate members, one from each Councilor District. Alternate members shall attend and participate in the deliberations of the Committee, but may not vote except when serving in lieu of elected members. The names of the members and the alternate members of the Committee shall be announced by the Speaker at the first session of the annual meeting of the House of Delegates each year.

"It shall be the duty of the Committee to hold meetings open to all members at such time and place as may be designated by the Speaker of the House of Delegates. At or before noon of the day preceding the last day of the annual meeting, the Committee shall report the result of its deliberations to the members of the Society in attendance by posting in a conspicuous place a ticket containing the names of one or more (preferably two) candidates for each office to be filled at that annual election."

WAPELLO COUNTY MEDICAL SOCIETY

CLASS III PILOT MEDICAL EXAMINATIONS

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, At the interim meeting of the American Medical Association held in Dallas, Texas, in December, 1959, the House of Delegates favorably acted on a resolution delegating the power of appointment of examining physicians for the Class III Airman Certificate to the Civil Air Surgeon, and

WHEREAS, This constitutes the unnecessary entrance of federal politics into the practice of medicine, as well as the abrogation of the basic concept of the freedom of choice of physicians by patients, and

WHEREAS, This examination follows the Physical Examination Form ACA-1345 (11-57) of the Civil Aeronautics Administration, and

WHEREAS, This form does not require highly skilled or exceptional training to execute, nor special mechanical devices not ordinarily available to examining physicians performing this type of overall evaluation for usual insurance examinations, and

WHEREAS, The physicians of these United States have both skill and competence in this type examination, and

WHEREAS, The Class III Airman's Certificate refers to private pilots as contrasted with commercial or airline pilots, and

WHEREAS, It will work a hardship on the applicant to have to seek out a non-essential, so-called "specialist" in the field of examining pilots, and

WHEREAS, These examinations will be needed in almost every county in the country, and the prospect of specialist examiners would have the effect of discouraging the growth of the Class III pilot group, the reverse of what is desirable; therefore, be it

Resolved, That the Iowa State Medical Society at its regular annual meeting April 24 to 27, 1960, go on record as favoring the proposition of having all duly licensed physicians considered qualified to perform Class III Pilot Medical Examinations, and be it further

Resolved, That the American Medical Association be petitioned through our delegates thereto to rescind and erase from the records the Dallas Resolution delegating to the Civil Air Surgeon the power to appoint a limited number of examiners, which restriction appears to be without true cause or purpose.

DAVIS COUNTY MEDICAL SOCIETY

CLASS III PILOT MEDICAL EXAMINATIONS

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, At the interim meeting of the American Medical Association held in Dallas, Texas, in December, 1959, the House of Delegates favorably acted on a resolution delegating the power of appointment of examining physicians for the Class III Airman Certificate to the Civil Air Surgeon, and

WHEREAS, This constitutes the unnecessary entrance of federal politics into the practice of medicine, as well as the abrogation of the basic concept of the freedom of choice of physician by patient, and

WHEREAS, This examination follows the Physical Examination Form ACA-1345 (11-57) of the Civil Aeronautics Administration, and

WHEREAS, This form does not require highly skilled or exceptional training to execute, nor special mechanical devices not ordinarily available to examining physicians performing this type of overall evaluation for usual insurance examinations, and

WHEREAS, The physicians of these United States have both skill and competence in this type examiation, and

WHEREAS, The Class III Airman's Certificate refers to private pilots as contrasted with commercial or airline pilots, and

WHEREAS, It will work a hardship on the applicant to have to seek out a non-essential, so-called "specialist" in the field of examining pilots, and

WHEREAS, These examinations will be needed in almost every county in the country, and the prospect of specialist examiners would have the effect of discouraging the growth of the Class III Pilot group, the reverse of what is desirable, be it therefore

Resolved, That the Iowa State Medical Society at its regular annual meeting April 24 to 27, 1960, go on record as favoring the proposition of having all duly licensed physicians considered qualified to perform Class III Pilot Medical Examinations, and be it further

Resolved, That the American Medical Association be petitioned through our delegates thereto to rescind and erase from the records the Dallas Resolution delegating to the Civil Air Surgeon the power to appoint a limited number of examiners, which restriction appears to be without true cause or purpose.

SAC COUNTY MEDICAL SOCIETY

VENDOR PAYMENT ALLOWANCE TO DISPENSING PHYSICIANS

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, Members of the Sac County Medical Society at their regular meeting expressed unanimous disapproval of the Vendor Medical Program, and especially with regard to medicines and medications dispensed by the physicians, either by the physician's desire or because of necessity, and in view of the fact that the present plan is unjust and inequitable as to fees charged for drugs dispensed by the physician (cost plus ten per cent) and the fees charged or allowed to the pharmacists (retail less ten per cent) and,

WHEREAS, Dispensing of medicine and medications is an ethical procedure in the practice of medicine, and also a very large percentage of the physicians outside of the larger cities dispense some if not all of their medications and drugs directly to the patients they serve, and

WHEREAS, We believe that the present Vendor Program, as it is being done today, works an injustice to both the physician who dispenses and the patient, and that it is more costly to the taxpayer through the State Department of Social Welfare, and

WHEREAS, We believe that in view of the above, the fees for medicines dispensed by physicians should be on the same basis as the fees allowed pharmacists for the same medications, whether it be 10, 20, or 30 per cent less than the retail price, therefore be it

Resolved, That the Sac County Medical Society recommends that a change in the Vendor Medical Program be made, allowing the physician to dispense medications, either by his choice or of necessity, and that the fees allowed for such medications be on the same basis as if such were dispensed by a pharmacist on a prescription basis.

SAC COUNTY MEDICAL SOCIETY

FEDERAL AND STATE MEDICAL AID PROGRAMS

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Sac County Medical Society, at its regular meeting March 17, 1960, expressed unanimous disapproval of the Vendor Medical Care Program, Forand-type legislation, and Medicare-type programs, and

WHEREAS, We believe that the Veterans Program for care of non-service connected disabilities represents one of the greatest threats to the free practice of medicine, and

WHEREAS, We believe that Iowa, with one of the highest percentages of senior citizens, many of whom are financially independent, should vigorously oppose politically inspired Forand-type legislation, and

WHEREAS, Neither the aged nor the indigent in this area have at any time lacked adequate and good medical care, and

WHEREAS, The Iowa State Medical Society has never definitely approved the Vendor Program, and

WHEREAS, The Vendor Program interjects a third party between the doctor and the patient and in the process makes medical care bound by red tape, subject to third party dictates, and over-all more costly, therefore be it

Resolved, That the Sac County Medical Society recommends:

1. That the Iowa State Medical Society be requested to endeavor to terminate federal and state level participation in medical programs by direct payment for medical services rendered to indigent patients;
2. That such payments when deemed necessary be made to the patient directly on a local basis through the County Department of Social Welfare;
3. That the interjection of government, whether federal, state, or local, be only assistance by the request of the patient rather than a directory capacity by the direct solicitation of the Department of Social Welfare.
4. That the practice of medicine is outside the realm of politicians' capabilities and therefore its management should likewise be out of their domain.

MONTGOMERY COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The officers of the Iowa State Medical Society approved the Vendor Payment Plan and virtually forced acceptance by its component County Societies, and

WHEREAS, This plan has been in effect for over one year, and

WHEREAS, This plan has proved to have the same basic faults as the Forand Bill, viz. (1) eligibility for benefits are determined by statistics and not by need, (2) similar statistics prevent the eligible, as well as the ineligible, from actually costly care when needed, and, (3) the benefits derived are thus added tax monies without need, and

WHEREAS, This program is actually under complete control of nonmedical personnel, and the participation of the professional medical committees are on a purely token basis to provide approval of decisions already made by lay personnel; therefore be it

Resolved, That the Iowa State Medical Society cancel all commitments, rules, and regulations, with the State and Federal Welfare Society and stop the Vendor Payment Plan at the earliest possible time, or the end of current contract time.

CERRO GORDO COUNTY MEDICAL SOCIETY

RESTRICTION OF BLUE SHIELD OFFERINGS

(Referred to the Reference Committee on Insurance and Medical Service for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

Be It Resolved, That the Iowa State Medical Society recommend to the Iowa Medical Service that only the following three basic contracts be offered:

A. Full service coverage limited to the medically indigent group.

B. A partial indemnity policy costing a higher premium but paying higher fees than (A) which at the election of the physician might be accepted in full payment. (This policy could be tailored for the government employee group.)

C. A "blue chip" policy paying prevailing fees in full as fixed by the local practitioners.

And be it further,

Resolved, That these contracts may be sold on a deductible and or co-insurance basis, and be it finally

Resolved, That the Articles of the Iowa Medical Service be amended, if need be, to permit the writing of the above policies.

SCOTT COUNTY MEDICAL SOCIETY

PHYSICIAN IMMUNITY IN EMERGENCY FIRST AID

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the re-report of the reference committee.)

WHEREAS, The public is suit conscious, and

WHEREAS, The public furthermore expects a practicing physician always to stop at the scene of an accident and offer his services, therefore be it

Resolved, That the Iowa State Medical Society take the necessary legislative action to make the following law:

"No person who in good faith renders emergency care at the scene of the emergency shall be liable for any civil damages as a result of any acts or omissions by such person in rendering the emergency care."

SCOTT COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of delegates, see the report of the reference committee.)

WHEREAS, The State Welfare Department has proved its disregard for the members of the Iowa State Medical Society by publishing directives without the consultation of those members, and

WHEREAS, The State Welfare Department has no regard for the taxpayers' dollar in the manner in which it administers the A.D.C. program, and

WHEREAS, The State Welfare Department has no regard for the cost of the service offered by the physician in addition to the cost of clerical work of the doctor's office in administering his part of the program and hence the doctor operates at a loss, and

WHEREAS, The nursing home inspection sheet as created and administered by the State Welfare Department demonstrates the typical bureaucratic and socialistic aspect of the entire Vendor Program, therefore be it

Resolved, That the Vendor Payment Program be no longer tolerated by the Iowa State Medical Society members, and if the program must be tolerated, this shall only be done if it is administered at the level of the county or "hyphenated" medical societies.

CERRO GORDO COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The instructions from the Department of Health, Education, and Welfare to the State Board of Social Welfare give the State Board considerable latitude in administering the Vendor Program and makes it clear that a uniform fee schedule need not be used throughout the state, so long as the range of medical services available to the recipients is uniform, and

WHEREAS, It is believed that the individual county societies would be more effective in dealing directly with the State Board of Social Welfare in problems peculiar to each community, therefore be it

Resolved, That the Iowa State Medical Society should cease further discussion with the State Board of Social Welfare in respect to statewide fee schedules and that the State Medical Society recommends that each County Society negotiate its own fee schedule directly with the State Board of Social Welfare.

SCOTT COUNTY MEDICAL SOCIETY

1962 ISMS ANNUAL MEETING

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Scott County Medical Society wishes to invite the Iowa State Medical Society to Davenport for the state meeting in 1962, and

WHEREAS, The City of Davenport is anxious to entertain the Iowa State Medical Society in 1962, and

WHEREAS, The Bowling Congress necessitates the moving of the meeting time in Des Moines to May, 1962, and

WHEREAS, The facilities in Davenport are available in April or May, therefore be it

Resolved, That the Iowa State Medical Society meet in Davenport, Iowa, in 1962.

DUBUQUE COUNTY MEDICAL SOCIETY

NECESSARY CHANGES IN THE CONSTITUTION AND BY-LAWS

(Referred to the Reference Committee on Articles of Incorporation and By-Laws for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Executive Council of the Iowa State Medical Society is the interim governing body of the House of Delegates, and

WHEREAS, The Executive Council is composed of eleven councilors and elected officers of the State Medical Society, and

WHEREAS, These officers represent the grass roots of the State Medical Society, and

WHEREAS, Liaison members are appointed by the Board of Trustees with equal voting power, and

WHEREAS, The Constitution and By-Laws in Article 4, Section 16, as appears in the first paragraph on pages 12 and 13. now reads: "The Executive Council shall consist of the Councilors, the Trustees, the Delegates to the American Medical Association, the President, the President-Elect, the Vice-President, the Speaker of the House of Delegates, the Secretary and the Treasurer of the Society, and two Delegates-at-Large elected as the By-Laws may provide. Effective January 1, 1962, the alternate delegate to the American Medical Association shall become a non-voting member of the Executive Council. Twelve members of the Executive Council shall constitute a quorum. The Executive Council shall be called into session by the President at his discretion or upon the written petition of five of its members." Now, therefore be it

Resolved, That lines 1 through 7 be changed to read as follows: "The Executive Council shall consist of the Councilors, the Trustees, the Delegates to the American Medical Association, the President, the President-Elect, the Vice-President, the Speaker of the House of Delegates, the Secretary and the Treasurer of the Society. The two Delegates-at-Large elected as the By-Laws may provide are to serve without vote."

POLK COUNTY MEDICAL SOCIETY

1962 ISMS ANNUAL MEETING

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, Adequate facilities will be available to hold the 1962 annual meeting of the Iowa State Medical Society in Des Moines in May, following the American Bowling Congress, now therefore be it

Resolved, That the Polk County Medical Society cordially invites the Iowa State Medical Society to avail itself of these facilities and hold its annual meeting in Des Moines in 1962.

POCAHONTAS COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Vendor Payment Program initiated January 1, 1959, by the State Department of Social Welfare has resulted in a marked increase in the cost of indigent medical care, and

WHEREAS, The respective counties are better able to allocate funds and set up rules for disbursing welfare monies in accordance with their needs, and

WHEREAS, County medical societies are willing and able to cooperate with county boards of social welfare to insure adequate care of all indigent groups with the least expense to the taxpayers, therefore be it

Resolved, That federal and/or state funds available for public assistance be allocated equitably to the respective counties, to be disbursed by said counties in conformity with their usual methods prior to January 1, 1959.

POCAHONTAS COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Vendor Payment Program has vacillated in its policy on payment for injections by physicians because of apparent ignorance of the principle involved, and

WHEREAS, The cost of injectable drugs is subject to great variation, therefore be it

Resolved, That the fee for injection under the Vendor Payment Program be on the basis of payment for a specialized service, rather than on the cost of the drug used.

POCAHONTAS COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The Vendor Payment Program has set two standards for the billing of drugs, depending on whether dispensed by physician or druggist, and

WHEREAS, The cost of drugs to physicians is equal to or greater than that to druggists, therefore be it

Resolved, That the billing of drugs under the Vendor Payment Program be the same whether drugs are dispensed by physicians or by druggists.

BOARD OF TRUSTEES

STUDENT LOAN FUND

(Referred to the Reference Committee on Reports of Officers for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, In 1936 the Baldridge-Beye Student Loan Fund was established as a memorial to two physicians who lost their lives carrying out assignments for the Iowa State Medical Society, and

WHEREAS, In 1951, the Iowa State Medical Society vitalized the memorial and voted to allot one dollar per dues-paying member in order to establish funds to be used for loan purposes, and these funds were then made available to medical students to assist them in completing their education, and

WHEREAS, In 1952, the ISMS established the Iowa State Medical Society Educational Loan Fund and voted to discontinue the Baldridge-Beye Memorial Loan Fund as a loan fund and voted to contribute the money in the Baldridge-Beye fund to the American Medical Education Foundation, with these funds to be earmarked for the State University of Iowa College of Medicine, and

WHEREAS, All existing Iowa State Medical Society Educational Loan Funds are being utilized, and

WHEREAS, Although limited, the Baldridge-Beye funds would enhance the number of deserving medical students to whom the ISMS Educational Loan Fund could provide financial assistance, which is the purpose for which the Baldridge-Beye Memorial was established, now therefore be it

Resolved, That the Baldridge-Beye Memorial Fund be contributed to the ISMS Educational Loan Fund effective January 1, 1961.

POLK COUNTY MEDICAL SOCIETY

AMALGAMATION OF THE MEMBERS OF THE WARREN COUNTY MEDICAL SOCIETY WITH POLK COUNTY MEDICAL SOCIETY

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The members of the Warren County Medical Society have expressed their desire to disband as a Society, and

WHEREAS, The individual doctors of medicine now practicing in Warren County, Iowa, wish to become active members of the Polk County Medical Society, and

WHEREAS, The members of the Polk County Medical Society, through the Council of that Society, have expressed a welcome and a willingness to accept the Warren County physicians as fellow members, now therefore be it

Resolved, On this 11th day of April, 1960, that the Iowa State Medical Society permit the Polk County Medical Society to amend its By-Laws in such manner as to make eligible for membership in that Society, in accordance with provisions of the By-Laws otherwise stated, those doctors of medicine residing or practicing in Warren County.

WARREN COUNTY MEDICAL SOCIETY
Office of the Secretary
April 9, 1960

Edwin M. Kingery, Executive Secretary
Polk County Medical Society
Des Moines, Iowa

Dear Mr. Kingery:

I have today received a copy of the resolution which was prepared as a result of the meeting of the committee on April 6, 1960. We of the Warren County Medical Society approve of this resolution as stated. Assuming that this resolution is approved by the proper bodies and we are accepted as members of the Polk County Medical Society, the Warren County Medical Society will be disbanded.

Sincerely,
R. C. MCGEEHON, M.D. /s/
R. C. MCGEEHON, M.D., Secretary
Warren County Medical Society

CALHOUN COUNTY MEDICAL SOCIETY

INSTRUCTION OF AMA DELEGATES IN REGARD TO PUBLIC EDUCATION CAMPAIGN

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, A resolution was introduced by Calhoun County at the 1959 meeting of the House of Delegates of the Iowa State Medical Society advocating a massive public education campaign regarding the unprecedented economic bargain that modern medical care constitutes, in contrast to the pitiful offerings of the neosocialists, and

WHEREAS, We have observed very little of this type of activity on the national level in this great election year, therefore be it

Resolved, That our delegates to the American Medical Association convention be definitely instructed to carry this program forward until some positive action is taken at the national level.

CALHOUN COUNTY MEDICAL SOCIETY

EQUALIZATION OF PRICES PAID FOR MEDICINES TO PHYSICIANS AND DRUG STORES UNDER THE VENDOR PLAN

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, A remarkable inequality exists between prices paid on the Vendor Program to dispensing physicians and to drug stores for medicine prescribed under this carcinomatous program, and

WHEREAS, This situation has the effect of telling physicians of the state of Iowa that they shall not dispense their own medicines, therefore be it

Resolved, That the proper officers of the Iowa State Medical Society be instructed to obtain equality in fees paid to physicians and drug stores.

CALHOUN COUNTY MEDICAL SOCIETY

RECOGNITION OF SUB-STANDARD PRACTITIONERS BY BLUE SHIELD

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, It is a well known scientific fact that so-called "doctors of chiropractic" contribute nothing but parasitism to the people they "treat," and any money spent in this way is wasted, and

WHEREAS, Blue Shield is to be asked to pay such individuals for the alleged care of Social Welfare recipients, therefore be it

Resolved, That the Iowa State Medical Society spend its efforts toward removing chiropractors from the list of people who can be paid for "service" by the Department of Social Welfare, rather than in considering recognition of such individuals by the Iowa State Medical Society.

WEBSTER COUNTY MEDICAL SOCIETY

PHYSICIAN PARTICIPATION IN FEDERAL MEDICAL PROGRAMS

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, political and social trends in the United States and in the world reveal a growing attitude of paternalism on the part of national governments in the field of medical care, at the expense of liberty and responsibility on the part of citizens, physicians, and private organizations, and

WHEREAS, it is the belief of most American physicians that a further progression of these changes will cause a deterioration in the quality of medical practice, increased costs of medical care, and destruction of a personal and private doctor-patient relationship in every day medical practice, and

WHEREAS, there are indications at this time that federal legislation may be thrust upon us which will inaugurate a chain of events leading to the complete subjugation of private medical practice in the United States by a government-sponsored program, involving substantially all American citizens, and

WHEREAS, it is probable that such legislation, if enacted, would not reveal its undesirable features to general view until a time too late to permit reversal of that legislation, and

WHEREAS, such legislation will seek by inducement or by compulsion, direct or indirect, to dictate to physicians the terms of their employment in serving their patients, effectively depriving them, in substance if not in form, of those rights and privileges which are essential to the survival of a vigorous and intellectually independent profession, and

WHEREAS, the flow of events clearly indicates that only strong, prompt, and enlightened action by the united members of the medical profession will be adequate to avoid the catastrophe of their complete domination by government, and

WHEREAS, a suitable course of action is open to us, which will preserve our professional independence without denying our services to patients who seek them directly, and

WHEREAS, the active cooperation and support of physicians is essential to the functioning of any system of medical care, and

WHEREAS, no measure short of a direct and far-reaching new approach to the problem offers any assurance of our survival as a proud and independent profession,

Now, Therefore, Be It Resolved: That the House of Delegates of the Iowa State Medical Society, recognizing the responsibilities of Iowa physicians to themselves, to their patients, and to their profession, and recognizing the legal rights of Iowa physicians as free citizens in a society of free men, hereby establish as an officially recognized policy of this Society that its members will discourage by every legal means the participation by Iowa physicians in any system of medical practice which places an agency or an official of government as a third party in the doctor-patient relationship, or which eliminates or restricts the right of a patient to select his physician, or the right of a physician to select his patient, or which uses the authority of government to establish fees or conditions of medical practice, other than those regulations appropriate to customary licensing procedures, or to the provision of care to bona fide indigent wards of a governing body, or to veterans of military service having service connected disorders.

And, Be It Further Resolved: That members of the Iowa State Medical Society agree to use every legal and just means at their disposal, within this Society and its component societies, and within the American Medical Association, and within any other societies which may be required or desirable under existing laws, to win to this cause the support of members of the American Medical Profession in general, so that efforts to establish a compulsory program of governmentally controlled medical care may be effectively defeated.

POLK COUNTY MEDICAL SOCIETY

USE OF ANIMALS FOR RESEARCH

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, there are a large number of animals destroyed every year in Iowa, and

WHEREAS, there is a great need for animals in the research studies conducted by many Iowa institutions and laboratories, and

WHEREAS, the laws in several other states provide a procedure whereby animals may be properly obtained for research studies with much less difficulty than in Iowa.

Therefore, Be It Resolved, that the Iowa State Medical Society sponsor and support appropriate legislation to provide an adequate and humane procedure whereby animals may be obtained for studies by approved research workers.

HUMBOLDT COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PROGRAM

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The officers of the Iowa State Medical Society and the delegates meeting in regular session approved the Vendor Payment Plan against the wishes of the great majority of the practicing physicians of this state, and

WHEREAS, This plan has proved to be expensive to the taxpayers of our state and county, without improvement in the quality of medical care to the recipients, and

WHEREAS, The older system of local supervision worked satisfactorily and at less expense, therefore be it

Resolved, That the Iowa State Medical Society terminate the Vendor Payment Plan at the earliest possible time.

PAGE COUNTY MEDICAL SOCIETY

FINANCING OF CARE COSTS IN STATE HEALTH INSTITUTIONS

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, A felon may be supported for much of his lifetime at state expense in an institution, but

WHEREAS, A family which is financially solvent is required to furnish at least partial support of a member of such family when it is necessary that he be confined to either a Mental Health Institute or the State Tuberculosis Sanatorium in the interest of public safety or public health, as the case might be, now

Be It Resolved, That the necessary legislation be proposed and supported by the Iowa State Medical Society to correct this disparity; such legislation to require that the State of Iowa provide free care for the above-mentioned categories of patients.

PAGE COUNTY MEDICAL SOCIETY

VENDOR PAYMENT PLAN

(Referred to the Reference Committee on Legislation and Public Relations for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The membership of the ISMS was given the impression that its dealings with the State Department of Social Welfare in the Vendor Payment Program would be by mutual agreement,[1] and

WHEREAS, The membership also was given the impression that a working agreement might be made between a county society or any individual member and the county official in charge of the program locally,[2] and

WHEREAS, The membership is aware of the predicament now making their patients, in the categories included in this program, dependent upon their physicians' participation in

order that said patients may receive financial assistance, but

WHEREAS, The State Department of Social Welfare has directed county welfare departments to insist on changes even though the affected physicians do not agree to these changes and even the county officials disapprove them, and

WHEREAS, In a recent communication,[3] the Director of Division of Standards and Procedure, a responsible person in the administration of the Vendor Payment Program, states "The Department of Social Welfare has had *no discussion* or written statement *which is concerned with any agreement with the Iowa State Medical Society as it would not enter into such.*" Now

Therefore Be It Resolved, That this House of Delegates of the Iowa State Medical Society direct the president, "as the real head of profession of this State during his term of office," and the Executive Council (as it would be one of this group's duties)[4] to herewith sever any and all current working arrangements between the Iowa State Medical Society, or any of its members, and our State Department of Social Welfare, and

Be It Further Resolved, That this House of Delegates direct the President and the Executive Council to enter into new negotiations with our State Department of Social Welfare, taking the necessary deliberate time to allow for the formulating of (1) a policy which at its least shall have a term of no less than a year without changes, (2) that said policy shall be changed only by mutual agreement between the State Welfare Department and one of the bodies of this Medical Society which can act with authority, (3) that said policy be such as to provide for satisfactory care of any patient coming within the scope of the program under discussion, (4) that said policy shall in no way besmirch or disparage the honor and dignity of the medical profession in the State of Iowa, and lastly

Be It Resolved, That this House of Delegates ask the membership of the Iowa State Medical Society to abide by such new arrangements as can be made with the State Welfare Department, so that the interests of affected patients would be protected.

[1] Newsletter 59-1
[2] Newsletter 59-6
[3] Letter to Burks 3-22-60
[4] Articles of Incorporation and By-Laws 1957

PAGE COUNTY MEDICAL SOCIETY

PHYSICIAN PARTICIPATION IN MEDICAL SOCIETY POLICY DECISIONS

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, The practice of medicine becomes increasingly complex, and

WHEREAS, The problems facing the medical profession grow in number and magnitude, and

WHEREAS, To help cope with the situation the Iowa State Medical Society has a staff of loyal, conscientious, and devoted lay personnel, but

WHEREAS, It is still incumbent upon physicians to map their own destinies,

Therefore Be It Resolved, That the members of the Iowa State Medical Society be reminded of their privilege and responsibility to take active roles in suggesting and deciding policies which will help perpetuate unfettered medical practice.

PAGE COUNTY MEDICAL SOCIETY

CLASS III PILOT MEDICAL EXAMINATIONS

(Referred to the Reference Committee on Miscellaneous Business for study and recommendation. For final action by the House of Delegates, see the report of the reference committee.)

WHEREAS, Under the CAA regulations the physician of the applicant's choice could perform a physical examination for the student or private pilot license, but

WHEREAS, The FAA is attempting to limit examinations to designated examining physicians, and

WHEREAS, A group of physicians at the Interim Meeting of the AMA met with FAA medical officials, and were said to have endorsed the plan of the FAA in the name of the AMA, but

WHEREAS, The requirement to see a specially designated examining physician might impose hardships on many individuals seeking pilots' licenses, in contrast to the present situation in which they can be examined by their family doctors,

Therefore Be It Resolved, That this House of Delegates instruct the Iowa delegates to the AMA to enter a resolution at the June meeting of the AMA protesting any such action and endorsing the present system of examining student and private pilots.

LIFE AND ASSOCIATE MEMBERSHIPS

LIFE MEMBERSHIPS
ON THE BASIS OF 50 YEARS' PRACTICE AND 30 YEARS' MEMBERSHIP

Appanoose	Charles S. Hickman, Centerville
Calhoun	Paul W. Van Metre, Rockwell City
Cerro Gordo	Steve A. O'Brien, Mason City
Johnson	John E. Kimball, West Liberty
Linn	Howard O. Young, Marion
	Charles L. Closson, Walker
Lucas	Roy C. Gutch, Chariton
Madison	Carl B. Hickenlooper, Winterset
Polk	Tom B. Throckmorton, Des Moines
	Julius S. Weingart, Des Moines
Scott	George W. Behrens, Davenport
Story	Guy E. McFarland, Sr., Ames
Tama	Charles W. Maplethorpe, Sr., Toledo
Washington	Enos D. Miller, Wellman
Wright	George E. Schnug, Dows
Woodbury	James E. Reeder, Sr., Sioux City

ASSOCIATE MEMBERSHIPS
ON THE BASIS OF RETIREMENT OR INCAPACITATION

Buena Vista	Max A. Armstrong, Newell
Clinton	Henry J. Heusinkveld, Clinton
Des Moines	Ernest J. Voigt, Burlington
Dubuque	Wayne A. Johnston, Dubuque
Humboldt	Ralph W. Beardsley, Livermore
Linn	Paul W. Berney, Cedar Rapids
	Gaylord R. Andre, Lisbon
Mahaska	George H. Clark, Oskaloosa
Polk	Eugene H. McCaffrey, Des Moines
	Frank W. Fordyce, Des Moines

Nominations for the outstanding Iowa General Practitioner of the Year Award were received.

The House of Delegates was adjourned at 1:40 p.m.

WEDNESDAY SESSION
April 27, 1960

The Wednesday session of the House of Delegates was called to order at 7:35 a.m. The House of Delegates approved the taking of attendance by registration cards. There were 126 delegates, 5 voting alternates and 18 ex-officio members present.

County	*Delegate*	*Alternate*
Adair	C. D. Shope	
Adams	C. L. Bain	
Allamakee	A. F. Wiley	
Appanoose	E. A. Larsen	
Audubon	L. E. Jensen	
Benton	J. E. Blumgren	
Black Hawk	T. L. Trunnell	
	C. D. Ellyson	
	R. C. Miller	
	F. G. Loomis	
Boone	R. L. Wicks	
Bremer	R. E. Shaw	
Buchanan	R. L. Knipfer	
Buena Vista	H. E. Farnsworth	
Butler	F. A. Rolfs	
Calhoun	C. R. Wilson	
Carroll	R. J. Ferlic	
Cerro Gordo	G. J. Sartor	
	L. W. Swanson	
	J. W. Lannon	
Chickasaw	P. C. Richmond	
Clarke	G. I. Armitage	
Clay	D. H. King	
Clayton	E. G. Kettelkamp	
Clinton	V. W. Petersen	
	R. O. Emmons	
Crawford	J. M. Hennessey	
Dallas-Guthrie	W. A. Castles	
	R. J. Peterson	
Davis	W. D. Haufe	
Decatur	E. E. Gamet	
Delaware	R. E. Clark	
Des Moines	F. G. Ober	
	E. P. Russell	
Dickinson	Eugene Johnson	
Dubuque	D. F. Ward	
	R. J. McNamara	
	L. P. Alt	

County	*Delegate*	*Alternate*
Emmet	R. J. Dawson	
Fayette	A. F. Grandinetti	
Floyd	R. A. Fox	
Franklin	R. E. Munns	
Green	R. E. Jongewaard	
Grundy	L. E. Frink	
Hamilton	G. A. Paschal	
Hancock-Winnebago	J. R. Camp	
Hardin	J. J. Shurts	
Harrison	A. C. Bergstrom	
Henry	P. G. Couchman	
Howard	C. W. Rainy	
Humboldt	J. H. Coddington	
Iowa	D. F. Miller	
Jasper		J. W. Ferguson
Jefferson	K. H. Strong	
Johnson	K. R. Cross	
	R. H. Flocks	
	W. M. Kirkendall	
	J. M. Layton	
	C. E. Schrock	
	S. C. Ware	
		M. L. Mosher
Jones	L. D. Caraway	
Lee	L. C. Pumphrey	
	J. W. Saar	
Linn	J. J. Keith	
	John Parke	
	J. J. Redmond	
	L. J. Halpin	
	J. T. Hecker	
Lucas	H. D. Jarvis	
Lyon	G. D. Bullock	
Madison	J. E. Evans	
Mahaska		R. L. Alberti
Marion	Peter Van Zante	
Marshall	O. D. Wolfe	
	L. O. Goodman	
Mills	M. L. Scheffel	
Mitchell	R. J. Smith	
Monona	J. L. Garred	
Montgomery	Oscar Alden	
Muscatine	K. E. Wilcox	
Page	W. G. Kuehn	
Palo Alto	G. H. Keeney	
Plymouth	J. P. Trotzig	
Pocahontas	J. M. Rhodes	
Polk	D. F. Crowley, Jr.	
	E. T. Burke	
	R. A. Dorner	
	B. C. Barnes	
	D. O. Newland	
	R. B. Stickler	
	M. E. Alberts	
	J. T. Bakody	
	S. J. Zoeckler	
	J. E. Gustafson	
	P. K. Hughes	
	N. W. Irving	
	A. N. Smith	
Pottawattamie	H. W. Mathiasen	
	F. N. Weber	
	G. H. Pester	
Poweshiek	J. C. DeMeulenaere	
Ringgold	D. E. Mitchell	
Sac	J. W. Gauger	
Scott	A. B. Hendricks	
	J. F. Bishop	
	J. H. Sunderbruch	
	P. E. Gibson	
Shelby	G. E. Larson	
Sioux	M. O. Larson	
Story	G. E. McFarland, Jr.	
	G. E. Montgomery	
Tama	A. J. Wentzien	
Taylor	R. W. Boulden	
Union	H. J. Peggs	
Van Buren	J. T. Worrell	
Wapello	P. D. McIntosh	
		L. J. Gugle
Warren	C. A. Trueblood	
Wayne	C. N. Hyatt	
Webster	H. H. Kersten	
	R. W. Lee	
Winneshiek	A. F. Fritchen	
Woodbury	J. M. Krigsten	
	H. E. Rudersdorf	
	J. W. Bushnell	
	P. M. Cmeyla	
		F. W. Wilson
Worth	W. G. McAllister	
Wright	C. P. Hawkins	

DELEGATES AT LARGE

J. W. Billingsley

OFFICERS PRESENT AS EX-OFFICIO MEMBERS OF THE HOUSE

E. F. Van Epps	C. E. Radcliffe
R. F. Birge	G. S. Atkinson
H. J. Smith	L. V. Larsen
G. H. Scanlon	R. N. Larimer
S. P. Leinbach	F. C. Coleman
R. M. Dahlquist	C. V. Edwards, Sr.
J. E. Houlahan	W. D. Abbott
M. A. Blackstone	Fred Sternagel
C. W. Seibert	G. V. Caughlan

Minutes of the April 24 meeting of the House of Delegates were read and approved. The election of officers followed and the following physicians were chosen:

President-Elect	O. N. Glesne, Fort Dodge
Vice President	V. W. Petersen, Clinton
Trustee	O. D. Wolfe, Marshalltown (3-year term)
	*G. C. Scanlan, Iowa City (1-year term)
Secretary	*R. F. Birge, Des Moines
Treasurer	H. J. Smith, Des Moines
Speaker of the House of Delegates	*C. V. Edwards, Sr., Council Bluffs
Vice-Speaker of the House	J. T. McMillan III, Des Moines
Delegate to the AMA	L. W. Swanson, Mason City
	C. H. Stark, Cedar Rapids
Alternate Delegate to the AMA	E. M. Smith, Eagle Grove
	R. H. Flocks, Iowa City

Councilors:	3rd District	*D. H. King, Spencer
	5th District	*G. E. McFarland, Jr., M.D., Ames
	8th District	*J. H. Sunderbruch, Davenport
	10th District	*H. J. Peggs, Creston

*Re-elected at the 1960 Annual Meeting.

Following the election, Dr. Otto N. Glesne, of Fort Dodge, the president-elect was introduced and spoke briefly to the delegates.

Reference Committee Reports

The following reference committee reports were presented to and approved by the House of Delegates.

THE BOARD OF TRUSTEES

The Board of Trustees met in open session as a reference committee at 10:30 a.m., Monday, April 25, to consider the supplemental report of the Committee on Rural Health, the only item referred to it. It was not possible for the Board of Trustees to schedule its hearing on Sunday since it was necessary for the Trustees to be in attendance at the meeting of the Reference Committee on Reports of Officers.

The major consideration was the financing of a study of site choices for rural medical practice in Iowa. Following presentation of the report of the Committee on Rural Health at the Sunday meeting, it was ascertained that the W. K. Kellogg Foundation will not be able to commit funds to the underwriting of this project. The Board of Trustees believes additional consideration should be given to the scope of the study, as well as further exploration of methods of financing. Therefore, the Board of Trustees respectfully suggests that the House of Delegates authorize the appointment of a five-man committee, made up of two Trustees and three members of the Rural Health Committee, including the chairman, to make further investigation to determine whether or not the scope of the program that is now planned is sufficiently extensive, and also whether or not funds might be obtained from other organizations to assist in financing the survey.

Mr. Speaker, I move the adoption of this report.

G. H. SCANLON, M.D., *Chairman*
S. P. LEINBACH, M.D.
O. D. WOLFE, M.D.
J. W. BILLINGSLEY, M.D.
E. F. VAN EPPS, M.D.
L. C. PUMPHREY, M.D.
R. F. BIRGE, M.D.
H. J. SMITH, M.D.

REPORT OF OFFICERS

The Reference Committee on Reports of Officers, consisting of Dr. McNamara, Dr. Frech, Dr. Hughes, and Dr. Goodman, met in open session with the three Trustees of the State Medical Society present. The Supplemental Report of the Board of Trustees, as presented to the House of Delegates, was discussed in detail, and the general business of the Society was discussed and amplified by the Trustees. Delegates were present and presented ideas to the committee, all of which were concurrent with the Supplemental Report. It is the feeling of the committee that the Board of Trustees has done a very able and commendable job, and we do hereby move the adoption of the Supplemental Report of the Board of Trustees in its entirety.

Secondly, the resolution introduced by the Board of Trustees, subject student loan fund, is recommended for approval in its entirety.

Mr. Speaker, I move the adoption of this report as a whole.

L. O. GOODMAN, M.D., *Chairman*
R. J. MCNAMARA, M.D.
R. F. FRECH, M.D.
P. K. HUGHES, M.D.

MISCELLANEOUS BUSINESS

Mr. Speaker, and members of the House of Delegates, your Reference Committee on Miscellaneous Business met to consider the business assigned to it. To those who met with the Committee we wish to express our thanks for their advice and suggestions.

Your Committee first considered the Report of the MD/DO Liaison Committee. This report was favorably received, and it is our recommendation that the Liaison Committee should be continued. Mr. Speaker, I move the adoption of this portion of the report.

Next, the Supplemental Report of the Special Chiropractic Committee was discussed. Although this Committee's activity seems to be largely observation at this time, it was felt that this Committee serves a very important function and that it should be continued.

Mr. Speaker, I move the adoption of this portion of the report.

The committee next studied the Report of the Iowa Medical Milk Commission. This Commission is still in a formative stage, but it has already performed some valuable functions. It is the committee's recommendation that this Commission should be continued.

Mr. Speaker, I move the adoption of this portion of the report.

With respect to Resolution No. 4, introduced by Union County regarding a campaign to stimulate interest in medical careers, a great deal of concern was shown. Because of the decreasing number of students interested in medical careers and the increasing need for doctors, your committee feels that the State Society should take a more active role in stimulating students to consider medicine as a career. Although this activity must be carried out on a local county level, your committee feels that it would prove valuable to establish a committee to study this problem and stimulate this effort. Your committee, therefore, recommends the adoption of this resolution with the following addition, "and be it further

Resolved, That a committee be formed and appointed by the president of the Iowa State Medical Society, to set up a program for promoting interest in medical careers at the grade and high school levels, and further to act in liaison with the State University of Iowa College of Medicine, this committee to promote educational and informational programs similar to 'Future Doctors Clubs,' which are designed to interest students in medical careers."

Mr. Speaker, I move the adoption of this portion of the report.

The committee considered Resolution No. 5 from Union County, concerning a Department of Medical Economics at the S.U.I. Medical School. We were apprised of the program now being developed at the College of Medicine and feel that no action need be taken at this time.

Mr. Speaker, I move the adoption of this portion of the report.

Resolutions No. 9, No. 10, and No. 35, concerning Class III Pilot Medical Examinations were considered together, since the substance of these resolutions was identical. Your committee recommends approval of these resolutions.

Mr. Speaker, I move the adoption of this portion of the report.

Resolution No. 18, introduced by Scott County Medical Society, was an invitation to hold the 1962 Annual Meeting in Davenport. In addition, Resolution No. 20 from Polk County extended an invitation to hold the 1962 Annual Meeting in Des Moines. These resolutions and accompanying material were studied and considered jointly. In discussing these resolutions, your committee had to take into consideration the fact that the Annual Meeting is primarily for doctors practicing in Iowa, and that Des Moines is centrally located and more convenient to the majority of members of the State Society. Also, since the headquarters of the State Society are located in Des Moines, it is more convenient to conduct the business of the Annual Meeting here. The invitation from Scott County should be greatly appreciated by the House of Delegates. Judging by the brochure furnished the committee, a meeting at Davenport in most respects should be most successful because of the interest shown, not only by the Scott County Medical Society but by the civic leaders of Davenport. However, because of the reasons given above, your committee recommends the rejection of Resolution No. 18 by Scott County and the adoption of Resolution No. 20 by Polk County.

Mr. Speaker, I move the adoption of this portion of the report.

In regard to Resolution No. 25, introduced by the Polk County Medical Society, many problems were presented and discussed which must be settled by the counties concerned before any amalgamation can take place. The primary concern of the State Society in this proposed amalgamation would seem to be changing Warren County from one Councilor District to another. In accordance with the By-Laws of the Iowa State Medical Society, no component society may en-

close parts of more than one Councilor District. Therefore, the committee recommends the approval of this resolution with the following addition:

Resolved, That Warren County be transferred from the 10th to the 5th Councilor District, if and when this amalgamation is accomplished, and be it further

Resolved, That when this amalgamation is accomplished, the Polk County Medical Society shall have jurisdiction over both counties.

Mr. Speaker, I move the adoption of this portion of the report.

In regard to Resolution No. 34, introduced by the Page County Medical Society, reminding doctors of their responsibility toward the medical profession, the committee recommends its adoption.

Mr. Speaker, I move the adoption of this portion of the report.

Mr. Speaker, I move the adoption of this report as a whole.

C. N. HYATT, M.D., *Chairman*
B. C. BARNES, M.D.
L. V. LARSEN, M.D.
L. C. PUMPHREY, M.D.
M. E. ALBERTS, M.D.

ARTICLES OF INCORPORATION AND BY-LAWS

The materials referred to the Committee included the supplementary report of the Standing Committee on Articles of Incorporation and By-Laws and 3 resolutions.

The supplementary report of the Standing Committee on Articles of Incorporation and By-Laws first took up the matter of making the dean of the College of Medicine at the State University of Iowa a member of the Iowa State Medical Society's House of Delegates without vote. The Reference Committee recommends the acceptance of the Standing Committee's proposal as follows:

Resolved, That Article VI, Section 1, of the Amended and Substituted Articles of Incorporation of the Iowa State Medical Society, as amended, be amended by striking therefrom the fifth sentence thereof and substituting in lieu thereof the following:

"The officers of the Society as defined in these Articles, the past presidents of the Society for the immediate five previous years, and the dean of the State University of Iowa College of Medicine, shall be, ex officio, members of the House of Delegates without the right to vote unless that officer, past president, or dean be at the same time a duly-elected delegate."

Mr. Speaker, I move the acceptance of this portion of our report.

The Standing Committee on Articles of Incorporation and By-Laws on invitation of the Board of Trustees had also considered the possibility of changing the name of the Iowa State Medical Society so as to remove any suggestion that the Medical Society is a tax-supported state institution. The Reference Committee accepts the Standing Committee's recommendation that an appropriate committee be asked to study this matter and to report its findings to the House of Delegates in 1961.

Mr. Speaker, I move the acceptance of this portion of our committee's report.

Resolution No. 6 from the Union County Medical Society, and Resolution No. 8 from the Lee County Medical Society, both requested changes in the procedure for nominating candidates for ISMS elective offices. The Reference Committee has studied both of these resolutions and has listened to an open discussion of the issues involved. As a substitute for both of them, the Reference Committee proposes that Chapter 4 of the By-Laws as amended be amended by striking therefrom Sections 2, 3 and 4, and in lieu thereof substituting the following:

Section 2. No later than 30 days prior to each annual meeting members of the Committee on Nominations shall be elected at caucuses of the Delegates of each Councilor District. The Committee shall consist of 11 delegates, one to be chosen by each Councilor District. It shall have 11 alternate members, one to be chosen by each Councilor District. Alternate members shall participate in the deliberations of the Committee, but an alternate member may not vote except when serving in lieu of an elected member. It shall be the duty of the Committee to give careful consideration to the qualifications of all proposed candidates, always keeping in mind the best interests of the profession. The meetings of the Committee shall be open to all members of the Society, except when in executive session, and no meeting shall be held without adequate notification of all members of the Society. The notice of the first meeting shall include a list of names of the members of the Nominating Committee, together with an informative statement as to vacancies to be filled. No later than 15 days prior to the annual meeting, the Committee shall report its official ticket containing two or more candidates for each office to be filled at the annual meeting. This ticket shall be sent to all members of the Society no later than 10 days prior to the annual meeting.

Section 3. At the first session of the House of Delegates at each annual meeting, the Speaker shall call for additional nominations from the floor. There shall be no more than one nominating and one seconding speaker for each candidate. Thereafter, the nominations shall be closed, and lists of all candidates for offices posted promptly in conspicuous places.

Section 4. Election of officers shall be by printed ballot as the first order of business, after the reading of the minutes, at the last session of the House of Delegates at each annual meeting.

Mr. Speaker, I move the adoption of this portion of our report.

Resolution No. 19, introduced by the Dubuque County Medical Society proposed that the two Delegates-at-Large who represent Blue Shield on the ISMS Executive Council should be non-voting members of that board, since they are neither nominated nor chosen by all members of the Society or by those residing in a particular district. At the hearings it was called to the attention of the Reference Committee that the procedure for nominating those Members-at-Large and their status as voting members of the Executive Council was set forth explicitly in a "Memorandum of Understanding," dated September 12, 1956, between the Iowa State Medical Society and Iowa Medical Service. Thus, a change in the status of such members would abrogate an agreement with Blue Shield.

For this reason, the Reference Committee on Articles of Incorporation and By-Laws recommends the rejection of the Dubuque County Resolution, and recommends instead that the Executive Council be directed

to renegotiate the agreement with Blue Shield on this matter so that in the future these delegates will serve in ex-officio capacity without vote, and the House of Delegates will have a opportunity to approve the selection of Delegates-at-Large

Mr. Speaker, I move the adoption of this portion of our report.

Mr. Speaker, I move the adoption of this report as a whole.

R. M. DAHLQUIST, M.D., *Chairman*
R. L. WICKS, M.D.
R. E. JONGEWAARD, M.D.
K. FURUMOTO, M.D.
R. J. DAWSON, M.D.

INSURANCE AND MEDICAL SERVICE

Your reference committee on Insurance and Medical Service was given the responsibility of considering the following items referred to it by the House of Delegates:

1. Supplemental report of the Committee on Industrial Health.
2. Supplemental report of the Relative Value Study Committee.
3. Progress Report of the Iowa State Medical Society Policy Evaluation Committee.
4. Supplemental report of the Policy Evaluation Committee.
5. Special report by Doctor Earl C. Lowry, president of Blue Shield.
6. Resolution No. 14, introduced by Cerro Gordo County Medical Society, Subject: Restriction of Blue Shield Offerings.

Your reference committee wishes to commend to the House of Delegates the members of the various committees who have worked long and hard to prepare the reports submitted.

Your reference committee considered each item separately.

Since there was no debate on the first two items listed above, it is assumed that these reports are acceptable to the members of the House without change.

Therefore, with respect to: 1. The Supplemental Report of the Committee on Industrial Health—your committee recommends acceptance of this report.

Mr. Speaker, I move the adoption of this portion of the report.

2. Supplemental Report of Relative Value Study Committee. Your committee recommends acceptance of this report. We recommend further that each member of the House of Delegates read carefully the informational brochure entitled "About Relative Value Studies" included in the packet which was given to each delegate.

Your committee wishes to thank the 65 per cent of the membership of the Society which has returned the questionnaires and to urge the remainder to return them as soon as possible.

Mr. Speaker, I move the adoption of this portion of the report.

3. Progress Report of the Iowa State Medical Society Policy Evaluation Committee. Your committee recommends acceptance of this report as an interim informational report and recommends that the Policy Evaluation Committee continue its study on a broad, philosophical basis. Your committee urges that all members of the Iowa State Medical Society read carefully this Progress Report as well as the special article included in the delegates' packets and entitled "The Challenge of Medical-Care Insurance." They should then be prepared to present their views on these subjects next year when the final report is submitted.

Mr. Speaker, I move the adoption of this portion of the report.

4. Supplemental report of the Policy Evaluation Committee. Your reference committee wishes to call attention to the following quotation in the supplemental report: "Almost all of the representatives of the various specialties and generalist groups who appeared before the committee addressed their comments to specific 'gripes' concerning Blue Shield fees and coverage in their own fields. The profession should be strongly urged to take a less selfish and narrow point of view and to address itself to the more fundamental questions underlying the current controversy."

With respect to this quotation, it is the opinion of your reference committee that these men were invited to present the *specific problems* which they felt would arise *in their particular groups* when this plan was started a year ago. These, of necessity, dealt with *fees*. Since these matters were thoroughly covered in the previous discussions of the Policy Evaluation Committee, your reference committee recommends that future studies be concerned primarily with the more fundamental questions involved.

Mr. Speaker, I move the adoption of this portion of the report.

5. Special report by Doctor Earl C. Lowry, president of Blue Shield. Your reference committee recommends that the report be accepted for its informational value, but that no action be taken at this time and that it be referred to the Policy Evaluation Committee.

Mr. Speaker, I move the adoption of this portion of the report.

6. Resolution No. 14, introduced by Cerro Gordo County Medical Society, Subject: Restriction of Blue Shield Offerings. It is the opinion of your reference committee that this resolution involves fundamental issues which already have been assigned to the Policy Evaluation Committee for study. Therefore, your reference committe recommends that no action be taken at this time and that the resolution be referred for further consideration to the Policy Evaluation Committee.

Mr. Speaker, I move the adoption of this portion of the report.

Mr. Speaker, I move the adoption of this report as a whole.

Your chairman, on behalf of the entire reference committee, wishes to express appreciation of the fact that those who appeared before the committee gave their testimony in a statesmanlike, positive, and constructive manner.

Your chairman wishes especially to comment that his fellow reference committee members were no less statesmanlike, positive, and constructive in their discussion of the matters submitted and thanks them for their diligence.

M. O. LARSON, M.D., *Chairman*
T. L. TRUNNELL, M.D.
C. P. HAWKINS, M.D.
W. D. HAUFE, M.D.
J. E. HOULAHAN, M.D.

LEGISLATION AND PUBLIC RELATIONS

Your reference committee on Legislation and Public Relations held open hearings on Sunday, April 24 for three hours. At the termination of the open hearings, on direct question, no doctor present indicated any need for further open hearings. The committee then held further deliberations, calling in various members of the Society from time to time for additional information. The report of the committee will be divided into two portions.

The report of the medical section of the Interprofessional Adoption Study Committee was considered by the committee, and it is recommended that it be approved and that the Committee be continued.

The committee considered Resolution No. 30 from Polk County regarding ISMS supporting appropriate legislation to provide animals for research. We strongly urge that this become the policy of the State Medical Society.

Concerning Calhoun County's Resolution No. 26 regarding instruction of our AMA delegates to give further encouragement for a massive public education campaign, this is being implemented by the AMA at present. It was approved by our own Executive Council, presented to the Board of Trustees and the AMA where it was approved. It is therefore felt by your committee that no action need be taken on this resolution.

The committee considered Page County Resolution No. 32. The resolution concerns expenditure of state funds and is not basically a medical problem. The proposal is in contradiction to the efforts of your Society to keep governmental involvement in medical care to a minimum. In the belief that those persons capable of contributing toward their legal responsibilities should not be relieved thereof, this committee does not recommend adoption of this resolution.

Resolution No. 29 from Webster County was considered, and the letter from the legal counsel of the AMA was studied in reviewing this resolution. It is the feeling of legal counsel that to adopt this resolution as an official action of the State Medical Society would introduce the possibility of difficulties in the field of antitrust litigation which we should avoid. The committee therefore recommends disapproval of this resolution. This is not to be interpreted as a recommendation of the Reference Committee for or against participation of individual physicians in such field of activity.

The committee studied Resolution No. 28 from Calhoun County asking that the ISMS attempt to remove chiropractors from the list of people being paid for service by the Department of Social Welfare. Since the existing statutes specify that payments be made to any practitioner of healing arts licensed by the state, it would seem that nothing at present can be done on this subject without involved legislative changes, and therefore your committee recommends it not be adopted.

The committee studied the Supplemental Report of the Medico-Legal Committee and finds that it has made an intensive effort to secure information from various members of the bar regarding the anti-nuisance suit resolution from Marion County. As yet, a report from the Iowa State Bar Association has not been received. Your committee then recommends that the report of this committee be received and that the Committee continue to study the current problem.

The committee studied the Resolution No. 15 from Scott County regarding physician immunity in emergency first-aid, and recommends that this resolution be further studied by the Legislative Committee.

Mr. Speaker, I move the adoption of this portion of the report.

Fifteen resolutions—No. 1 (Boone County), No. 2 (Buena Vista County), No. 3 (Jefferson County), No. 7 (Des Moines County), No. 11 (Sac County), No. 12 (Sac County), No. 13 (Montgomery County), No. 16 (Scott County), No. 17 (Cerro Gordo County), No. 21 (Pocahontas County), No. 22 (Pocahontas County), No. 23 (Pocahontas County), No. 27 (Calhoun County), No. 31 (Humboldt County), and No. 33 (Page County); one Supplemental Report from the Committee on Legislation; and one HANDBOOK report from the Subcommittee on Medical Services to the Indigent were referred to the committee regarding the Vendor Payment Program. After holding extensive hearings to get all the facets of opinion of the membership, and after considering and studying all items individually, your committee makes the following recommendations.

It is felt that certain explanations regarding this program should be re-emphasized, since the entire idea is relatively new to the doctors of the state, and it was obvious in the hearings that some misunderstandings and misinterpretations are held. In the interest of illuminating the issues involved, your committee wishes to bring out the following points:

1. Federal payments for public assistance are not new in Iowa, since the first of these began in 1939. The present Vendor Payment Program became possible in 1950, but of course was initiated in Iowa in 1959. It constituted a basically different method of disbursing federal funds for public assistance.

2. The recipients of the Vendor Payment Program are truly indigent. It is important to realize that this one point separates this program from Forand-type programs, since these latter imply that health care is an *inherent right* without reference to the economic needs of the individual.

3. The Iowa State Medical Society and its Subcommittee on Medical Services to the Indigent have acted in an advisory capacity to the State Board of Social Welfare in implementing this program. There has been no signed contract. It should be realized that the federal statute authorizing these funds calls for equality of the range of services throughout the entire state. These statutes also indicate that medical care includes all forms of remedial care recognized by state law, which in Iowa includes M.D.'s, dentists, pharmacists, osteopaths, chiropractors, and chiropodists.

4. The federal statutes indicate several possibilities of use of these funds, provided they are administered by a single state agency. These methods are: (a) Pooled funds whereby respective counties might set up prepayment arrangements to meet the cost of medical service for assistance recipients. (b) Direct vendor payments which might be made directly to physicians, to a medical society or insurance company. (c) Money payments which would be paid directly to the patient and the patient then would be responsible for paying his bill to the doctor. These methods are permitted under federal statute but it is possible there may be limits under Iowa statutes. Investigation to the present

does not clearly indicate what the limitations are under the Iowa law.

5. It should be pointed out that the county welfare director is an employee of the State Department of Social Welfare, and not of the county.

As can be seen by the number of resolutions referred to this committee, many objections have been raised to the program. These may be separated into two categories:

1. Objections to the principle involved. Certainly the majority of doctors decry third-party medicine in which the government is the third party. However, for the indigent we have only two choices—to perform these services gratuitously or to be compensated through public funds. This group of people are politically significant, and we are obligated to take care of them. It is for this reason that the present program may take some pressure off organized medicine regarding Forand-type legislation, since if these people are adequately taken care of, the higher income groups may in the near future be adequately covered by voluntary health insurance.

2. The second category includes objections to the method of administration of the program. It would appear that the Subcommittee on Medical Services to the Indigent feels that it has had satisfactory liaison with the State Board of Social Welfare. It is obvious, however, that in the transmission of information and edicts from the State Department of Social Welfare, the rapport has progressively weakened. It is certain that communication could be improved at all levels. Another objection to the administration of the program has been in the area in which the State Department of Social Welfare has directly or indirectly attempted to modify the usual methods of practice. This has been most obvious in the disparity in the payment for drugs to physicians and druggists and in the method of payment for injections. The third objection has been the tremendous increase in total expense of this program due to over-utilization. As taxpayers as well as physicians, we are well aware, especially in the month of April, where this money comes from. The added irony is that the Social Welfare Department implied that the increased cost indicates relative insufficiency or even inadequacy of medical care previous to the institution of this program.

In its deliberations following the open hearings, the committee carefully reread and considered the report of the reference committee dealing with this subject during the 1959 sessions of the Iowa State Medical Society. This in essence urged the Society to permit for the passage of time during which it was hoped we might come better to accept the present plan. Judging from the comments heard at the open hearings, this has not come to pass. We feel, however, that the action of that committee was highly commendable in that it should eliminate possible charges that the Society has acted precipitously in whatever course it may take in the future.

The Reference Committee recommends that the Society attempt to improve the present program on a top priority basis, with a deadline of one year, by all steps at our command including the following: (a) Enlarge the Subcommittee on Medical Services to the Indigent by adding three members known to have opinions divergent to the present plan of operation. (b) Stimulate the efforts and enlarge the influence of the county medical and remedial care committees (auditing committees), thus increasing local control. (c) Insist on greater communication and consultation between the State Department of Social Welfare and the Iowa State Medical Society and insist that no changes, no matter how small, be made without prior consultation with the Iowa State Medical Society. (d) Insist that the State Department of Social Welfare policies be thoroughly understood, agreed to, and followed by county welfare directors and field workers. (e) Continue exploration of additional methods involving local county option.

Mr. Speaker, I move the adoption of this portion of the report.

Mr. Speaker, I move the adoption of this report as a whole.

J. M. RHODES, M.D., *Chairman*
J. W. GAUGER, M.D.
V. W. PETERSEN, M.D.
F. N. WEBER, M.D.

GENERAL PRACTITIONER OF THE YEAR AWARD

The Reference Committee on the General Practitioner Award, after careful deliberation, has selected Dr. George H. Keeney, of Mallard, Iowa, as Iowa's Outstanding General Practitioner for 1960.

The Reference Committee would like to point out that it was difficult to reach the decision because of the high caliber of nominees for the award.

Dr. Keeney will be placed in nomination for the nation's Outstanding General Practitioner Award that is presented annually by the American Medical Association.

A. F. FRITCHEN, M.D., *Chairman*
E. A. LARSEN, M.D.
C. L. BAIN, M.D.
R. E. CLARK, M.D.
P. L. BETTLER, M.D.

Dr. E. F. Van Epps, president-elect of the Society made the following address to the delegates:

Article IV, Section 8 of the Amended and Substituted Articles of Incorporation of the Iowa State Medical Society is entitled: President: "The President shall, so far as it is practicable, preside over all general meetings of the Society and shall preside over the House of Delegates in the event of the disability of both Speaker and Vice-Speaker. He shall deliver an annual address at such time as may be arranged before the general meeting, and shall perform such other duties as custom and parliamentary usage may require. He shall, by and with the advice and consent of the Board of Trustees, appoint all committees not otherwise provided for, and shall be, ex-officio, a member of all committees appointed by him. He may create and appoint special committees for any purpose and assign to them any powers and duties not in conflict with these Articles and By-Laws, provided that the terms of such committees may not extend beyond the next ensuing annual meeting unless continued by order of the House of Delegates. He shall be the real head of the profession of this state during his term of office, and so far as may be practicable, shall visit the component

societies by appointment, and assist the Councilors in making the work of the component societies more practical and useful."

I have made my committee appointments. I will not take the time to read them. I can assure you that I have taken considerable time in going over each committee and have tried to have a balanced membership especially in areas where I know that a difference of opinion does or could exist. These committee assignments are to be passed out among you now. These assignments are an important aspect of our Society's deliberations and decisions. I request that all committees dedicate themselves to the purposes and objects of the ISMS as expressly stated in Article II of our Articles of Incorporation.

I wrote this entire speech prior to this meeting (the middle of April). I have not added to nor have I subtracted from it since I've been in Des Moines. The reasons for stating this now are these: I believe that strict adherence to principles and philosophies with total rejection of expediency in our deliberations is a prerequisite to an enlightened decision and, if there is a split in the Society, and it appears that there is, let me state categorically that I am not on one side or the other. I am on top of the situation and will use the office of president to direct and channel discussions leading to a solution. May I quote from my acceptance speech given to the House last year? "Any controversy, or perhaps instead, any problem has its roots in a difference of opinion—basically involving principle or philosophy." If one can get to the root of the problem, there is no need to indulge in expediency, personalities or wishful thinking.

"Once the problem is clearly outlined, defined, and understood, implementation to remove the problem is much easier, more direct and less traumatic. There are usually several methods which can be used to resolve any problem, all with some small, irritating, built-in feature. Each has its own implications and alternatives.

"Where we usually fall down from here on to a decision is in communication—a lack of communication. Communication implies listening as well as talking. Communication is good when you agree with me; it is bad when you disagree. It tends to wander and encompass irrelevant material. It takes time. It can be wearisome. It is often misunderstood, both intentionally and unintentionally. Good communication is essential to a decision."

What are my thoughts and plans for the ensuing year? Are there any goals to be reached? What can be expected of this administration? Is there evidence that the format of the Scientific Session should be changed?

Last year, as a member of the Committee on Scientific Work, I proposed that one day be given to a public service project, one that has its roots in medical practice. The implication was that by doing this we would have first a *positive* program of public service and second that the people of Iowa would have evidence that as a Society we were medically concerned with many facets of daily living and, third, we would enhance the image the public has of our profession in general and of physicians in particular. The first project was given on Monday on Athletic Injuries. You are already aware of its acceptance by the physicians and the lay people who have charge of athletics at the secondary, high school, college and university level, together with the parents of the young people participating in athletic programs throughout the state. The second project for next year will be on automotive safety. I have enlarged the committee on Automotive Safety so that specific projects can be assigned within the committee for information and discussion. I expect the Committee to be active throughout the year, to bring a positive program to the constituent societies of the state for their consideration and support, and when indicated to meet with the Legislative Committee for possible legislative action. This program will culminate in a day's program at the annual meeting. We expect to invite the Commissioner of Safety, the officers and men of the Highway Patrol, legislators and interested members of various organizations. Depending on the success of this venture, I would request that the president-elect continue this program and enhance it. Iowa must add its voice to others who have started their programs. Interest by automotive manufacturers and legislators in this subject must be stimulated by all responsible citizens and especially by physicians who see daily proof of the adage: "An ounce of prevention is worth a pound of cure." I would also hope that programs of this type be continued, expanded, and perhaps even replace the scientific sessions as we have known them in the past.

Why do you physicians attend this meeting? Is it for political reasons? Do you come to enjoy yourself—meeting friends, dining, drinking, shopping, escaping from practice? Is it to gain knowledge, become better practitioners? Is it because there are specific items of interest to you on the program? Are there meetings better geared to the acquisition of knowledge that you attend? Are there too many meetings? Do you prefer this meeting over another to which you are more closely allied, i.e., Academy of General Practice meeting, specialty meetings, University post-graduate meeting, etc. Perhaps the only way to get answers to these questions would be from a survey of the membership. If previous experience gained from questionnaires is accurate, only 20-30 per cent would answer. This would not be a valid return. I would not base a decision to change the format on this amount of information. Attendance may be the only indication of approval or disapproval.

The daily problems with which we deal will, of course, be carefully considered, discussed and decided on the principles I've mentioned above. They will have to compete, however, with each other for a place on the agenda of subcommittees, committees, Board of Trustees, Executive and Judicial Councils.

I don't expect, nor do I want, total unanimity in the Society. Total unanimity is not wholesome because growth and progress thrive best in an AMOUNT of dissatisfaction and in a DEGREE of adversity. Pure emotional dissatisfaction or severe adversity can only choke growth and progress. It is my firm desire and plan to service the ENTIRE membership of the Iowa State Medical Society to the best of my ability. May I have your support? Thank you!

A motion was approved in the form of a recommendation recognizing the outstanding service of Dr.

John W. Billingsley as president during the past year. The motion included authorization for the Board of Trustees to prepare a suitable testimonial statement on behalf of the House of Delegates and officers of the Society for Dr. Billingsley's permanent personal possession.

The House of Delegates extended its thanks to Blue Shield for providing the sergeants-at-arms, Messrs. Wilbur R. Quinn, Kenneth Clark, Merle Libby and Clifford Van Zile.

The House of Delegates approved by standing ovation a motion commending the Speaker of the House of Delegates for the manner in which he had conducted the business affairs of the House of Delegates.

The House of Delegates was adjourned by the Speaker at 12:50 p.m.

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Cornish, James A., Storm Lake
Cornish, Lawrence R., Indianola
Corton, Richard V. M., Waterloo
Couchman, Mary Pucci, Mount Pleasant
Couchman, Phillip G., Mount Pleasant
Coughlan, Charles H., Fort Dodge
Coughlan, Daniel W., Des Moines
Coulson, Forest H., Burlington
Cox, Russell L., Estherville
Crabb, Dayrle N., Denison
Crain, Mattie M., Deep River (L.M.)
Crandall, Jack S., Marshalltown
Crawford, Robert H., Burlington
Crawford, W. McCulloch, Burlington
Cressler, Frank E., Churdan (L.M.)
Cretzmeyer, Francis X., Emmetsburg (L.M.)
Crew, Arthur E., Marion (L.M.)
Crew, Philip I., Cedar Rapids
Croker, Mary Ann, Manchester
Cromwell, James O., Des Moines
Cronkleton, Thomas E., Donahue
Cross, Donald L., Boone
Cross, Kenneth R., Iowa City
Crossley, J. Wesley, Osage
Crow, George B., Burlington (L.M.)
Crowley, Daniel F., Jr., Des Moines
Crowley, Paul J., Davenport
Croxdale, Edward L., Villisca
Culbertson, Robert A., Des Moines (A.M.)
Culp, David A., Iowa City
Cunnick, Paul C., Davenport
Cunningham, Glenn D., Davenport
Cunningham, Melvin B., Norwalk
Curtis, Dean, Chariton
Cusick, George W., Davenport

Dagle, Charles L., Fort Dodge
Dahl, Harry W., Des Moines
Dahlbo, John E., Sutherland
Dahlquist, Ralph M., Decorah
Dalager, Robert D., Ottumwa
Dalbey, Glenn M., Traer
Danielson, May, Clinton
Dankle, Willis K., Cresco
Dannenbring, Forrest G., Fort Dodge
Daut, Richard V., Davenport
Davey, William P., Sioux City
Davidson, Thorald E., Mason City
Dawson, Emerson B., Fort Dodge
Dawson, Robert J., Graettinger
Day, Philip M., Oskaloosa (L.M.)
Deakins, Martin L., Logan
Dean, William F., Osceola (L.M.)
Deaton, Helen J., Iowa City
DeBacker, Leo J., Jr., Iowa City
Decker, Charles E., Davenport
Decker, Henry G., Des Moines
Decker, Jay C., Sioux City (L.M.)
DeGowin, Elmer L., Iowa City
deGravelles, William D., Jr., Des Moines
DeLashmutt, Edward J., Fort Madison
Demaree, Chester, Lacona (L.M.)
DeMeulenaere, John C., Grinnell
Dempewolf, Robert D., Bellevue
Dennert, Walter G., Boone
Denser, Clarence H., Jr., Des Moines
Deranleau, Robert F., Perry
DeShaw, Earl H., Monticello
Des Marias, Varina, Grundy Center
Devine, Arthur W., Waterloo
Dewees, Frank L., Keokuk
DeYoung, Ward A., Glenwood
Diamond, Bernard, Waterloo
Dick, Fred, Jr., Waterloo
Dickens, James H., Des Moines
Diddy, Keith W., Perry
Dieckmann, Merwin R., Waterloo
Dierker, LeRoy J., Fort Madison
Dimsdale, Lewis J., Sioux City
*Dingman, Marshall E., Urbana (L.M.)
Ditto, Boyd L., Burlington
Ditto, Winston B., Rochester, Minnesota
Dixon, John B., Mason City
Doane, Grace O., Des Moines (A.M.)
Dohnalek, Donald W., Harlan
Dolan, Albert M., Evansdale
Dolan, Thomas R., Monticello
Dolmage, George F., Buffalo Center (L.M.)
Donahue, James C., Jr., Davenport
Donohue, Edmund S., Sioux City
Donlin, Robert E., Harlan
Donnelly, Madelene M., Des Moines
Doolittle, Russell C., Clearwater, Florida (L.M.)
Doran, John R., Ames
Dorner, Ralph A., Des Moines
Dorsey, Thomas J., Fort Dodge
Doss, W. Gordon, Des Moines
Doss, W. Norman, Leon
Douglas, Clarence E., Belle Plaine
Down, Howard I., Sioux City
Downey, Eugene M., Guttenberg
Downing, Arthur H., Des Moines
Downing, John S., Cedar Rapids
Downing, Leroy M., Cedar Rapids (L.M.)
Downing, Lloyd L., Cherokee
Downing, Wendell L., LeMars
Downs, Vernon S., Ottumwa
Dressler, John B., Ida Grove
Drew, Edward J., Des Moines
Drier, William C., Waterloo
Driver, Richard W., Waterloo
Drown, Roger E., Fort Dodge
Dubansky, Marvin H., Des Moines
★Duffie, Edward R., Port Hueneme, California
Dulin, Evelyn H., Iowa City
Dulin, John W., Iowa City
Dulin, Tarana J. G., Iowa City (L.M.)
Dulmes, Abraham H., Klemme
Duncan, Ellis, Oskaloosa
Dunlay, Robert W., Iowa Falls
Dunlevy, James H., Fairfield
Dunn, Dale E., Estherville
Dunn, Francis C., Cedar Rapids
Dunn, Robert C., Fort Dodge
Dunner, Ada, Des Moines
Dusdieker, Stanley W., Des Moines
Dutton, Dean A., Van Horne
Dwyer, Bernard B., Clinton
Dwyer, Robert E., Clinton
Dyson, James E., Phoenix, Arizona (A.M.)
Dyson, Ralph E., Des Moines

Eastburn, Harvey B., Burlington
Eaton, Robert C., Clarion
Ebinger, Edward W., Ottumwa
Echternacht, Arthur P., Fort Dodge
Eckart, Emile P., Fort Dodge
Eckstein, John W., Iowa City
Edelman, David L., Seattle, Washington
Edgerton, Winfield D., Davenport
Edington, Frank D., Spencer
Edwards, Charles C., Des Moines
Edwards, Charles V., Council Bluffs
Edwards, Charles V., Jr., Council Bluffs
Edwards, John F., Clinton
Edwards, Ralph R., Centerville
Egan, Thomas J., Bancroft
Egbert, Daniel S., Fort Dodge
Egermayer, George W., Elliott (L.M.)
Eggleston, Alfred A., Burlington

Ehlers, Gunther, Des Moines
Ehrenhaft, Johann L., Iowa City
Eicher, Charles R., Iowa City
Eiel, John O., Osage
Eisenach, John R., Shenandoah
Ekart, Paul I., Ottumwa
Eklund, Harold E., Des Moines
Eller, Lancelot W., Kanawha
Elliott, Olin A., Des Moines
Ellis, Howard G., Des Moines
Ellison, George M., Clinton
Ellsworth, H. Charles, Cherokee
Ellyson, Craig D., Waterloo
Elmer, Norman J., Sumner
Ely, Lawrence O., Des Moines
Emanuel, Dennis G., Ottumwa
Emerson, Donald D., Ottumwa
Emerson, Edward L., Muscatine
Emmons, Marcus B., Clinton
Emmons, Margaret S., Clinton
Emmons, Richard O., Clinton
Eneboe, Edward M., Hawarden
Engelmann, Andrew T., Sioux City
Enna, Melchior D., Dumont
Ennis, Harry H., Manchester (L.M.)
Entringer, Albert J., Dubuque
Entz, F. Harold, Waterloo
Erickson, Ernest D., Sioux City
Ericsson, Martin G., Cedar Falls
Erikson, Roland E., Davenport
Erps, William E., Storm Lake
Esders, Martin S., DeWitt
Estes, Maurice, Cedar Rapids
Evans, John E., Winterset
Evans, William I., Sac City
Evers, Alvin E., Pella
Ewing, Marlin B., Des Moines

Faber, Luke A., Dubuque
Faber, Luke C., Iowa City
Fail, Charles E., Adel
Fangman, Charles A., Carroll
Farago, Denes S., Arnolds Park
Farlow, Charles T., Farnhamville (L.M.)
Farnsworth, Harold E., Storm Lake
Farrage, Edward R., Council Bluffs
Fatland, John L., Des Moines
Faust, John H., Manson
Fee, Charles H., Denison
Fee, Knight E., Toledo
Feightner, Robert L., Fort Madison
Feldick, Harley G., Buffalo Center
Fellows, Joseph G., Ames
Felter, Allan G., Van Meter
Fenlon, Charles E., Mason City
Fenton, Charles D., Bloomfield
Fenton, Robert L., Centerville
Fergerson, Edward C., Iowa City
Ferengul, Ellen E., Mitchellville
Ferguson, John W., Newton
Ferguson, Paul, Lake City
Ferlic, Rudolph J., Carroll
Fesenmeyer, Charles R., Davenport
Fickel, Jack D., Red Oak
Field, Charles A., Rochester, Minnesota
Field, Grace E. W., Juneau, Alaska
Fieseler, Walter R., Fort Dodge
Fieselmann, George F., Spencer
Fillenwarth, Floyd H., Charles City
Fisch, Roman J., LeMars
Fischer, Harry W., Iowa City
Fisher, June M., Iowa City
Fisher, William A., Creston
Fishman, Harlow J., Cherokee
Fisk, Charlotte, Des Moines
Fitzgerald, Joseph D., Sloan
Flannery, Francis E., Cedar Rapids
Flater, Norman C., Floyd
Flatt, Adrian E., Iowa City
Flocks, Rubin H., Iowa City
Floersch, Eugene B., Council Bluffs
Flynn, Charles H., Clarinda
Flynn, Gordon A., Davenport
Flynn, James R., Jr., Cedar Rapids
Foley, Robert J., Davenport
Foley, Walter E., Davenport
Foley, Walter E., Jr., Davenport
Fomon, Samuel J., Iowa City
Fordyce, Frank W., Johnston (A.M.)
Forsythe, Dorothy C., Newton
Forsythe, Frank E., Newton
Foss, John F., Burlington
Foss, Robert H., Des Moines
Foster, Morgan J., Cedar Rapids
Foster, Wayne J., Cedar Rapids
Foster, Warren H., Clinton
Foulk, Frank E., Backus, Minnesota (L.M.)
Fowler, Willis M., Iowa City
Fox, Charles I., Pharr, Texas (L.M.)
Fox, Ray A., Charles City
Fox, Stephan, Ottumwa
Franchere, Chetwynd M., Mason City
Franey, William E., Cedar Rapids
Frank, Louis J., Sioux City
Frank, Owen L., Maquoketa
Fransco, Peter P., Ruthven
Fraser, James B., Des Moines
Fraser, John H., Monticello
Frech, Raymond F., Newton
Free, Richard M., Independence
Freed, David A., West Union
French, Royal F., Marshalltown (L.M.)
French, Valiant D., Cedar Falls
French, Vera V., Bettendorf
Frenkel, Hans S., Clarinda
Friday, Walter C., Burlington
Frink, Lyle F., Spencer
Frink, Lynn E., Reinbeck
*Fritchen, Arthur F., Decorah
From, Paul, Des Moines
Frost, Loraine H., Iowa City
Fry, Gerald A., Vinton
Fuchs, Edwin M., Independence
Fuerste, Frederick, Jr., Dubuque
Fuller, Lyle R., Garner
Funk, David C., Iowa City
Furumoto, Kiyoshi, Keosauqua

Gacusana, Jose M., Akron
Galinsky, Leon J., Des Moines
Gallagher, John P., Oelwein
Gamet, Elmo E., Lamoni
Gangeness, Leonard G., Des Moines
Gann, Edward R., Sigourney
Gannon, James, Laurens
Gantz, A. Jay, Greenfield
Ganzhorn, Harold L., Mapleto..
Gardner, Harold O., Waterloo
Gardner, John R., Lisbon (L.M.)
Garland, John C., Marshalltown
Garred, John L., Whiting
Garred, William P., Onawa
Garry, Patrick E., Dyersville
Garvy, Andrew C., Iowa City
Gauchat, Robert D., Iowa City
Gauger, John W., Early
Gaukel, Leo A., Onawa
Gault, James B., Creston
Gearhart, George W., Springville (L.M.)
Gee, Kenneth J., Shenandoah
Gelfand, Arthur B., Sioux City
Gelman, Webster B., Iowa City
George, Everett M., Des Moines
George, Louis A., Remsen
Gerard, Russell S., II, Waterloo
Gerdes, James C., Burlington
Gerken, James F., Waterloo
Gernsey, Merritt N., Long Beach, California (L.M.)
Gerstman, Herbert, Marion
Gessford, Howard H., George
Getty, Everett B., Primghar
Gibbon, William H., Sioux City
Gibbs, George M., Burlington
Gibson, Chelsea D., Sac City
Gibson, Douglas N., Des Moines
Gibson, Paul E., Des Moines
Gibson, Preston E., Davenport
Giegerich, Walter F., Atlantic
Gildea, Dorothy J., Davenport
Giles, Francis E., Fort Dodge
Giles, W. Clark, Council Bluffs
Gilfillan, Clarence D. N., Bloomfield
Gilfillan, Earl E., Bloomfield
Gilfillan, Edwin O., Bloomfield
Gilfillan, Homer J., Jr., Bloomfield
Gillett, Francis A., Oskaloosa (L.M.)
Gillett, R. Giles, Sigourney
Gillies, Carl L., Iowa City
Gillmor, Benjamin F., Red Oak (L.M.)
Gingles, Earl E., Onawa
Ginzberg, Fanny T,, Cherokee
Gittins, Thomas R., Sioux City
Gittler, Ludwig, Fairfield
Gius, John A., Iowa City
Givler, Robert L., Iowa City
Glenn, David H., Eldora
Glesne, Otto N., Fort Dodge
Glick, Julius, Dallas, Texas
Glissman, Jean B., Des Moines
Glomset, Daniel A., Des Moines
*Glomset, Daniel J., Des Moines (L.M.)
Goad, Robley R., Muscatine
Goddard, Chester R., Iowa City
Goddard, William B., Iowa City
Godfrey, James T., Jr., Cherokee
Goebel, Clarence J., Sioux City
Goebel, Kenneth E., Council Bluffs
Goen, Edwin J., Charles City
Goenne, Richard E., Davenport
Goenne, William C., Sr., Davenport
Goggin, John G., Ossian
Goldberg, J. Eugene, Waterloo
Goldberg, Louis, Des Moines
Goldman, Bernard R., Davenport
Gonior, Thomas H., Cherokee
Goodenow, Sidney B., Colo (L.M.)
Goodman, Lawrence O., Marshalltown
Goplerud, Clifford P., Iowa City
Gordon, Arnold M., Des Moines
Gorrell, Ralph L., Clarion
Gottsch, Edwin J., Shenandoah.
Gower, Walter E., Fort Dodge
Graham, James W., Sioux City
Graham, Thomas C., Iowa Falls
Grandinetti, Arthur F., Oelwein
Grandon, Eugene L., Iowa City
Grant, John G., Ames
Grau, Amandus H., Denison
Graves, John P., Dubuque
Gray, Gordon W., Davenport
Gray, John F., Melcher (L.M.)
Gray, Ralph E., Eldora
Gray, Lawrence R., Ankeny
Greco, Louis R., Jr., Boone
Green, David, Iowa City
Green, Don C., Des Moines
Green, John W., Jr., Des Moines
Greenblatt, Jerald, Cedar Rapids
Greene, Leonard H., Minneapolis, Minnesota
Greenhill, Solomon, Des Moines
Greenleaf, John S., Iowa City
Greenwald, Charles M., St. Cloud, Minnesota
Gregg, John B., Iowa City
Greteman, Theodore J., Dubuque
Griesy, Carl V., Rock Rapids
Griffin, Charles C., Dyersville
Griffin, Robert E., Sheldon
Griffith, William O., Council Bluffs
Griffith, Wylie H., Clinton
Grimmer, Billy, Grinnell
Grimmer, George T., Charles City
Groben, Elmer S., Columbus Junction
Grossman, Milton D., Sioux City
Grossman, Raymond S., Marshalltown
Grossmann, Edward B., Orange City
Grubb, Merrill W., Galva
Grundberg, Gerhard, Dows
Guggenheim, Paul, Council Bluffs
Gugle, Lloyd J., Ottumwa
Guiang, Sixto F., Burlington
Gurau, Henry H., Des Moines
Gustafson, John E., Des Moines
Gutch, Roy C., Chariton (L.M.)
*Gutch, Thomas E., Albia (L.M.)
Gutenkauf, Charles H., Des Moines

Hach, Felix T., Ankeny
Hagen, Edward F., Decorah
Haines, Diedrich J., Des Moines
Hake, Dexter H., Knoxville
Halbert, Helen E., Davenport
Hale, Albert E., Mason City
Hall, Bonnybel A., Maynard
Hall, Cluley C., Maynard
*Hall, Forest F., Webster City (A.M.)
Hallam, F. Tulley, Des Moines
Hallberg, Harold C., Oelwein
Halpin, Lawrence J., Cedar Rapids
Hamilton, Ben C., Jefferson (L.M.)
Hamilton, Cecil V., Ames
Hamilton, Henry E., Iowa City
Hamilton, William K., Iowa City
Hammer, Richard W., Des Moines
Hansell, William W., Des Moines
Hansen, David M., Cedar Falls
Hansen, Fred A., Red Oak
Hansen, Niels M., Des Moines
Hansen, Robert R., Marshalltown (L.M.)
Hansen, Russell R., Storm Lake
Hanson, Carl A., Waterloo
Hanson, Henry M., Waverly
★Hanson, Paull R., Mission, Texas
Hanson, Walter N., Mason City
Hanssmann, Irving J., Council Bluffs
Hardin, John F., Bedford
Hardin, Robert C., Iowa City
Harding, Dale A., Eagle Grove
Hardwig, Oswald C., Waverly
Harken, Conreid R., Osceola (L.M.)
Harkness, Gordon F., Davenport (L.M.)
Harman, Dean W., Glenwood
Harms, George E., Norway
Harned, Lewis B., Waterloo
Harper, George E., Fort Madison
Harper, Harry D., Fort Madison
Harper, William H., Jr., Keokuk
Harpring, Alice Jeanne, Davenport
Harrington, Arlan F., Cedar Rapids
Harrington, Raymond J., Sioux City
Harris, Herbert H., Sioux City

Harris, Ray R., Dubuque (L.M.)
Hart, Paul V., Des Moines
Hartley, Byron D., Mount Pleasant
Hartman, Frank T., Waterloo (L.M.)
Hartman, Howard J., Waterloo
Harvey, Glen W., Cedar Rapids
Harwood, Arthur M., Waverly
Hassebroek, Roy J., Orange City
Hastings, Philip R., Waterloo
Hastings, Richard A., Ottumwa
Haufe, W. David, Bloomfield
Hausheer, Herman J., Independence, Missouri
Havlik, Al J., Tama
Hawkins, Charles P., Clarion
Hayden, Milford D., Marcus
Hayes, William P., Cedar Rapids
Hayne, Robert A., Des Moines
Hayne, Willard W., Des Moines
Hazlet, Kenneth K., Dubuque
Heady, Conda C. C., Bloomfield (L.M.)
Hecker, John T., Cedar Rapids
Heeren, Ralph H., Des Moines
Heffernan, Chauncey E., Sioux City
Hegg, Lester R., Rock Valley
Hegstrom, George J., Ames
Heilman, Elwood H., Ida Grove
Heimann, Verne R., Sioux City
Heine, George W., Cedar Falls
Heise, Carl A., Jr., Jewell
Heise, Harris R., Marshalltown
Heise, Robert H., Story City
Heitzman, Paul O., Cedar Rapids
Helling, Harry B., Fort Madison
Helseth, Carleton T., Des Moines
Henderson, Lauren J., Cedar Falls
Henderson, Walker B., Oelwein
Hendricks, Atlee B., Davenport
Hendrickson, Alvin H., Sioux City
Henkin, John H., Sioux City
Henn, Samuel C., Cedar Falls
Hennes, Raphael J., Oxford
Hennessey, John M., Manilla
Hennessy, Felix A., Calmar (L.M.)
Hennessy, J. Donald, Council Bluffs
Henningsen, Artemus B., Clinton
Henstorf, Harold R., Shenandoah
Herlitzka, Alfred J., Mason City
Herman, John C., Boone
Herny, Peter M., Prairie City
Herrick, Walter E., Ottumwa
Herrmann, Christian H., Jr., Middle
Hersey, Nelson L., Independence
Hess, John Jr., Des Moines
Heuermann, Dorothy J., Coulter
Heusinkveld, Henry J., Clinton (A.M.)
Hickenlooper, Carl B., Winterset (L.M.)
Hickey, Robert C., Iowa City
Hickman, Charles S., Centerville (L.M.)
Hicks, Wayland K., Sioux City
Hildebrand, Howard H., Ames
Hill, Don E., Clinton
Hill, James W., Mount Ayr (L.M.)
Hill, Julia Ford, Santa Barbara, California (L.M.)
Hill, Lee F., Des Moines
Hill, Richard W., Lake Mills
Hines, Ralph E., Des Moines
Hintz, W. Charles, Cincinnati, Ohio
Hirleman, Hal R., Cedar Rapids
Hirsch, Harry N., Sioux City
Hirsch, Michael R., Des Moines
Hirst, Donald V., Council Bluffs
Hodges, Robert E., Iowa City
Hoffman, Paul M., Tipton (L.M.)
Hoffman, Robert W., Des Moines
Hofmann, William P., Davenport
Hodgenson, George B., Eagle Grove
Hollander, Werner M., Davenport
Hollis, Edward L., Marengo (L.M.)
Holman, David O., Ottumwa
Holtey, Joseph W., Ossian
Holzworth, Paul R., Des Moines
Hombach, Walter P., Council Bluffs
Hommel, Placido R. V., Elkader
Honke, Edward M., Sioux City
Hooley, John S., Sigourney
Horn, Gilbert O., Cherokee
Hopkins, David H., Des Moines (A.M.)
Hopp, Ralph L., Council Bluffs
Hornaday, William R., Des Moines
Hornberger, John R., Manning
Horsley, Arthur W., Iowa City
Horst, Arthur W., Sioux City
Hospodarsky, Leonard J., Des Moines
Hosford, Horace F., Burlington
Hostetter, John I., Des Moines
Houghton, Earl J., Bettendorf
Houlahan, Jay E., Mason City
Houlihan, Francis W., Ackley
Houser, Cass T., Cedar Rapids (L.M.)
Housholder, Harold A., Winthrop (L.M.)
Howar, Bruce F., Webster City
Howard, Dwayne E., Sioux City
Howard, Lloyd G., Council Bluffs
Howe, Gerald W., Iowa City
Howell, David A., Dubuque
Howell, Elias B., Ottumwa (L.M.)
Hoyt, John L., Creston
Hruska, Glen J., Belmond
Huber, Robert A., Charter Oak
Hubiak, John, Odebolt
Hudek, Joseph W., Garnavillo (L.M.)
Huey, John R., Cedar Rapids
Huffman, William C., Iowa City
Hughes, Parker K., Des Moines
Hughes, Robert O., Ottumwa
Hughes, Walter W., Davenport
Hull, Gene I., Des Moines
Hulstra, Hans, Iowa City
Hunt, Van W., Mason City
Hunting, Ralph D., Cedar Rapids
Huntley, Charles C., Avoca
Hurevitz, Hyman M., Davenport
Huston, Daniel F., Burlington
Huston, John, Jr., Cedar Rapids
Huston, K. Garth, Seattle, Washington
Huston, Marshall D., Cedar Falls
Huston, Paul E., Iowa City
Hutchinson, Roy M., Fort Dodge
Hyatt, Charles N., Corydon

Ihle, Charles W., Cleghorn (L.M.)
Ingham, Paul G., Mapleton
Ingle, Newell G., Cedar Rapids
Ingraham, David R., Sewal
Ireland, William W., Ottumwa
Irish, Thomas J., Forest City
Irving, Noble D., Jr., Des Moines
Isham, Robert B., Osage

Jack, Darwin B., Oelwein
Jackson, James M., Jefferson (L.M.)
Jackson, James S., Mount Pleasant
Jacobi, Heinz S., New Hampton
Jacobs, Carl A., Sioux City
Jacobs, Edward L., Conrad
Jacobs, James P., Iowa City
Jacobs, Moody D., Cedar Rapids
Jacoby, James A., Burlington
Jacques, Lewis H., Iowa City
Jaenicke, Kurt, Clinton (L.M.)
Jaffe, Harold, Iowa City
Jaggard, Robert S., Oelwein
James, Audra D., Des Moines (A.M.)
James, David W., Des Moines
James, Lora D., Fairfield (L.M.)
James, Peter E., Audubon (L.M.)
Janse, Phillip V., Algona (L.M.)
January, Lewis E., Iowa City
Jaquis, John R., Reinbeck
Jardine, George A., New Virginia (A.M.)
Jarvis, Harry D., Chariton (L.M.)
Jaskunas, Stanley R., Bloomfield
Jauch, Karl E., LaPorte City
Jeffries, James H., Waterloo
Jeffries, Milo E., Marshalltown
Jeffries, Roy R., Waukon
Jenkins, George A., Albia (L.M.)
Jenkins, George D., Burlington
Jenkins, Hanley F., Des Moines
Jenkinson, Harry R., Iowa City
Jenks, Alonzo L., Jr., Des Moines
Jensen, Kenneth V., Clarinda
Jensen, LeRoy E., Audubon
Jensen, Ralph, Ames
Jerdee, Ingebrecht C., Clermont
Jerome, Peter, Davenport
Johann, Albert E., Des Moines (A.M.)
Johnson, Aaron Q., Sioux City
Johnson, Charles O., Des Moines
Johnson, Clarence A., Coon Rapids
Johnson, Eugene L., Spirit Lake
Johnson, G. Raymond, Ottumwa
Johnson, Harvey A., Atlantic
Johnson, Merton A., Nevada
Johnson, Norman M., Clarinda
Johnson, Richard M., Denison
Johnson, Robert J., Iowa Falls
Johnson, Robert M., Des Moines
Johnston, C. Harlan, Des Moines
Johnston, George B., Estherville
Johnston, Harry L., Ames
Johnston, Helen, Des Moines (A.M.)
Johnston, Wayne A., Dubuque (A.M.)
Jones, Cecil C., Des Moines
Jones, Charles L., Gilmore City (L.M.)
Jones, Clare C., Spencer
Jones, G. William, Des Moines
Jones, Harold W., Sioux City
Jones, Harry J., Cedar Rapids (L.M.)
Jones, Maynard L., Newton
Jongewaard, Albert J., Jefferson
Jongewaard, Jean, Jefferson
Jongewaard, Robert E., Scranton
Joranson, Robert E., Council Bluffs
Jordan, John W., Maquoketa
Jowett, John R., Clinton
Joyce, George T., Mason City
Joynt, Albert J., Waterloo
Joynt, Michael F., Marcus
Joynt, Robert J., Iowa City
Judiesch, Kenneth J., Iowa City
Juel, Einer M., Atlantic

Kaack, Harry F., Jr., Clinton
Kaelber, William W., Iowa City
Kahler, Hugo V., Reinbeck (L.M.)
Kane, Thomas E., Boone
Kanealy, John F., Cedar Rapids
Kapke, Franklin W., Mason City
Kaplan, David D., Sioux City
Kaplan, Robert M., Davenport
Kasiske, Walter B., Keokuk
Kassmeyer, John C., Dubuque
Kast, Donald H., Des Moines
Katzmann, Frederick S., Des Moines
Kaufmann, Robert J., Newton
Keane, Kenneth M., Sioux City
Keech, Roy K., Cedar Rapids (L.M.)
Keeney, George H., Mallard (L.M.)
Keettel, William C., Iowa City
Kehoe, Joseph L., Davenport
★Keil, Philip G., Washington, D. C.
Keiser, Orris S., Muscatine
Keith, Charles W., Strawberry Point (L.M.)
Keith, John J., Marion
Kelberg, Melvin R., Sioux City
Keller, Erwin F., Davenport
Keller, John T., Iowa City
Kelley, Edmund J., Des Moines
Kelley, John H., Des Moines
Kelley, Newell R., Des Moines
Kelly, Anthony H., Sioux City
Kelly, Clarkson L., Jr., Charles City
Kelly, Dennis H., Des Moines (A.M.)
Kelly, Dennis H., Jr., Des Moines
Kelly, John F., Sioux City
Kelly, John F., Fort Dodge
★Kelly, Thomas W., Riceville
Kelly, William J., Dubuque
Kelsey, James E., Des Moines
Kemp, Robert R., Keokuk
Kenefick, John N., Algona
Kennedy, Edwin D., Mason City
Kennedy, Elizabeth S., Oelwein (L.M.)
Kent, Robert W., Oakdale
Keohen, Gerald F., Dubuque
Kepros, Peter F., Cresco
Kern, George A., Des Moines
Kern, Lester C., Waverly (L.M.)
Kerr, W. Hawley, Hamburg
Kershner, Frank O., Clinton
Kersten, Herbert H., Fort Dodge
Kersten, John R., Fort Dodge
Kersten, Paul M., Fort Dodge
Kestel, John L., Waterloo
Kettelkamp, Enoch G., Monona
★Kettelkamp, Richard G., Monona
Kettelkamp, William E., Cedar Rapids
Keyser, Earl L., Marshalltown
Keyser, Ralph E., Marshalltown (L.M.)
Kieck, Ernest G., Etowah, North Carolina (A.M.)
Kiesau, Milton F., Postville
Kiesling, Harry F., Lehigh
Kilgore, Ben F., Des Moines
Kimball, Glenn J., Des Moines
Kimball, John E., West Liberty (L.M.)
Kimberly, Lester W., Davenport
King, Dean H., Spencer
King, Ross C., Clinton
Kingsbury, Charles L., Keokuk
Kingsbury, Kenneth R., Ottumwa
Kirch, Walter A., Des Moines
Kirkendall, Walter M., Iowa City
Kirkham, Lindsay J., Mason City
Klein, John L., Jr., Muscatine
Klein, Robert F., Muscatine
Kleinberg, Henry E., Des Moines
Klocksiem, Harold L., Des Moines
Klocksiem, Roy G., Rockwell City
Klok, George J., Council Bluffs
Kluever, Herman C., Fort Dodge
Knight, Benjamin L., Cedar Rapids
Knight, Edson C., Marshalltown
Knight, Russell A., Rockford
Knipfer, Robert L., Jesup
Knosp, Alton, Paton
Knosp, Norman C., Belle Plaine
Knott, Peirce D., Sioux City
Knowles, Fred L., Fort Dodge
Knox, James M., Cedar Rapids (L.M.)
Knox, Robert M., Des Moines

Koch, John S., Cedar Rapids
Koelling, Lloyd H., Newton
Kohrs, Edward F., Davenport
Koons, Claude H., Des Moines
Koontz, Lyle W., Vinton
Kopecky, Edward F., Cedar Rapids
Kopsa, Walter J., Tipton
Korfmacher, Edwin S., Grinnell
Kornder, Louis H., Davenport
Korns, Horace M., Iowa City
Korson, Selig M., Independence
Kos, Clair M., Iowa City
Koser, Donald C., Cherokee
Kosieradzki, Henry, Marshalltown
Krettek, John E., Council Bluffs
Krigsten, Joe M., Sioux City
Krigsten, William M., Sioux City
Kroack, Kalman J., Buffalo Center
Kruckenberg, William G., Cedar Rapids
Krueger, Norman L., Casey
Kruml, Joseph G., Council Bluffs
Kruse, Otto E., Tipton
Kruse, Rolf F., Waterloo
Kruse, Rufus H., Marshalltown
Kruse, Steven G., Slater
Kuehn, Willard G., Clarinda
Kugel, Robert B., Iowa City
Kuhl, Augustus B., Jr., Davenport
Kuhl, Robert H., Creston
Kuhn, Mark A. R., Waterloo
Kuker, Leo H., Carroll
Kurtz, Cecilia M., Cedar Rapids
Kyer, Donald L., Dubuque
Kyle, William S., Washington (L.M.)

Lagen, Mansfield S., Dubuque
Lagoni, Ralph P., Eldridge
Lake, Carlton B., Cedar Rapids
LaMar, John W., Des Moines
Lamb, Harry H., Davenport
Lambrecht, Paul B., Des Moines
Landry, Gerard R. F., Council Bluffs
Langworthy, Henry G., Dubuque (L.M.)
Lanich, Oscar K., Jr., Waterloo
Lannon, James W., Mason City
LaPorte, Paul A., Des Moines
Larimer, Robert C., Sioux City
Larimer, Robert N., Sioux City
Larsen, Elmer A., Centerville
Larsen, Frank S., Fort Dodge
Larsen, Harold T., Fort Dodge
Larsen, Lawrence V., Harlan
Larson, Andrew G., Dickens (L.M.)
Larson, Carroll B., Iowa City
Larson, Erling, Jr., Davenport
Larson, Gerald E., Elk Horn
Larson, John A., Fort Madison
Larson, Lester E., Decorah
Larson, Marvin O., Hawarden
Larson, Walter W., Ames
LaRue, Jack L., Anita
Latchem, Charles W., Des Moines
Latimer, Milton J., Burlington
Latourette, Howard B., Iowa City
Laube, Paul J., Dubuque
Laughlin, Lawrence L., Coralville
Laughlin, Ralph M., Cedar Rapids
Lauvstad, Edward E., Osceola
Lavender, John G., George
Lawler, Matthew P., Jr., Des Moines
Lawlor, Jeremiah F., Cherokee
Lawrence, Montague S., Iowa City
Layton, Jack M., Iowa City
Lederman, Joseph, Oskaloosa
Ledogar, Joseph A., Webster City
Lee, Richard H., Dubuque
Lee, Robert W., Fort Dodge
Lee, Wayne R., Burlington
Leehey, Paul J., Independence
Leffert, Frank B., Centerville
Lehman, Emery W., Bluffton, Indiana (L.M.)
Lehr, Sylvan M., Cedar Rapids
Leibel, Lynn L., Council Bluffs
Leinbach, Samuel P., Belmond
Leinfelder, Placidus J., Iowa City
Leiter, Herbert C., Sioux City
Lekwa, Alfred H., Story City
Lemke, Betty A. T., Des Moines
Lemon, Kenneth M., Oskaloosa
Lenzmeier, Albert J., Davenport
Leonard, Thurman K., Madrid
LePoidevin, Jean S., Waterloo
Lerner, Ernest N., Mount Pleasant
Lesiak, John J., Titonka
Levy, James W., Sioux City
Lewis, Faye C., Webster City
Lewis, William B., Webster City
Lichtenberg, Robert P., Keokuk
Lierle, Dean M., Iowa City
Lierman, Clifford E., Lake View
Light, Henry R., Grinnell
Liken, John A., Creston
Limbert, Edwin M., Council Bluffs
Limburg, John I., Jr., Jefferson
Lindell, Sherman E., Le Mars
Linder, Enfred E., Ogden
Lindholm, Claire V., Armstrong
Lindholm, Hugo A., Armstrong
Lindley, Ellsworth L., Cedar Rapids
Linge, Scott, Fayette
Linthacum, Robert W., Dysart
Liska, Edward J., Ute
Lister, Eugene E., Dallas Center
Lister, Kenneth E., Ottumwa
Lloyd, John M., Washington
Locher, Robert C., Cedar Rapids
Lockhart, Harold A., Cedar Rapids
Loeck, John F., Independence
Loes, Anthony M., Dubuque (L.M.)
Lohman, Frederick H., Waterloo
Lohmann, Carl J., Burlington
Lohnes, John H., Cedar Rapids
Lohr, Phillips E., Churdan
Long, Draper L., Mason City
Longworth, Wallace H., Boone
Looker, Richard F., Cedar Rapids
Loomis, Frederic G., Waterloo
Lorfeld, Gerhard W., Davenport
Losh, Clifford W., Des Moines (L.M.)
Losh, Clifford W., Jr., Des Moines
Lovejoy, E. Parish, Des Moines
Lovelace, Daniel D., Clinton
Loving, Luther W., Estherville
Lowry, Charles F., Council Bluffs
Lowry, Earl C., Des Moines
Loxterkamp, Edward O., Rolfe
Ludwig, Clarence J., Waterloo
Luehrsmann, Bernard C., Dyersville
Luhman, Lowell A., Iowa City
Luke, Edward, Washington, D. C. (L.M.)
Lulu, Donald J., Des Moines
Lutton, John D., Sioux City
*Lynn, Charles E., Dubuque (A.M.)
Lyons, Mary Louise, Des Moines

MacGregor, John K., Mason City
MacLeod, Hugh G., Greene
MacQueen, John C., Iowa City
McAllister, William G., Manly
McBride, Robert H., Sioux City
McCaffrey, Eugene H., Des Moines (A.M.)
McCall, John H., Allerton (L.M.)
McCarthy, Frank D., Sioux City
McClean, Earl D., Des Moines (L.M.)
McClellan, John W., Onawa
McClure, Gail A., Ames
McClurg, Frank H., Fairfield
McConkie, Edwin B., Cedar Rapids
McConnell, Robert W., Davenport
McCool, Robert F., Clarion
McCormack, William C., Ames
McCoy, Harold J., Des Moines
McCoy, John T., Cedar Falls
McCrary, W. Ashton, Lake City
McCreedy, Murry L., Washington
McCreight, George C., Carmel Valley, Calif. (A.M.)
McCrory, Wallace W., Iowa City
McCuistion, Harry M., Sioux City
McDonald, Don J., Cedar Rapids
McDowall, Gilbert T., Gladbrook (L.M.)
McEleney, Donald A., Cedar Rapids
McFadden, F. Ross, Davenport
McFarland, Guy E., Ames (L.M.)
McFarland, Guy E., Jr., Ames
McFarland, Julian E., Ames (A.M.)
McFarlane, Donald J., Dubuque
McFarlane, John A., Sioux City
McGahey, William B., Webster City
McGarvey, Cornelius J., Des Moines
McGeehon, Robert C., Indianola
McGilvra, Arthur L., Sioux Center
McGinnis, George C., Fort Madison
McGrane, Merle J., New Hampton
McGuire, Kenneth L., Keota
McHugh, Charles P., Sioux City (L.M.)
McIllece, Raymond C., Fort Madison
McIntosh, Philip D., Ottumwa
McIntyre, Caryl C., Waterloo
McKay, Kenneth H., Muscatine
McKay, Richard V., Jr., Dubuque
McKean, Frank F., Allison
McKee, Albert P., Iowa City
McKibben, Joe T., Carroll
McKitterick, John C., Burlington
McLaughlin, Philip A., Coralville
McMahon, Arthur E., Jr., Mason City
McMahon, John M., Iowa City
McMahon, Thomas, Garner (L.M.)
McMeans, Thomas W., Davenport
McMillan, George J., Fort Madison
McMillan, James T. III, Des Moines
McMurray, Edward A., Newton
McMurray, Harry N., Burlington
McNamara, Robert J., Dubuque
McNamee, Jesse H., Des Moines
McQuiston, J. Stuart, Cedar Rapids
McTaggart, William B., Fort Dodge
McVay, Melvin J., Lake City
Macy, William W., Iowa City
Magaret, Ernest C., Glenwood
Magee, Emery E., Waterloo (L.M.)
Maher, Louis L., Des Moines
Mahoney, James D., Council Bluffs
Mailliard, Robert E., Storm Lake
Maixner, Reynold R., Ottumwa
Maixner, William D., Ottumwa
Maland, Donald O., Cresco
Malek, John C., Iowa City
Maltry, Emile, Jr., Fort Dodge
Manderscheid, Robert A., Boone
Manderson, Harry J. B., Iowa City
Mangan, J. Thomas, Forest City
Manning, Ephraim L., Davenport
Maplethorpe, Charles W., Toledo (L.M.)
Maplethorpe, Charles W., Jr., Toledo
Marble, Edwin J., Marshalltown
Marble, Willard P., Marshalltown
Margules, Maurice P., Council Bluffs
Margulies, Harold, Des Moines
Marinos, Harry G., Mason City
Maris, Cornelius, Sanborn
Mark, Edward M., Clarksville
Mark, Milton S., Des Moines
Marker, John I., Davenport
Markham, William S., Harlan
Marme, George W., DeWitt
Marquis, Fred M., Waterloo
Marquis, George S., Des Moines
Marriott, Charles M., Sioux City
Marsh, Frederick E., Council Bluffs
Marsh, Frederick E., Jr., Council Bluffs
Martin, James W., Holstein
Martin, Josef R., Carroll
Martin, Ronald F., Sioux City
Martin, Sidney D., Carroll (L.M.)
Martini, Henry F., Council Bluffs
Mason, Edward E., Iowa City
Mast, Truman M., Washington
Mater, Dwight A., Knoxville
Mathiasen, Emmett B., Council Bluffs
Mathiasen, Henning W., Council Bluffs
Mathiasen, John W., Council Bluffs
Matthey, Carl H., Davenport
Matthey, Walter A., Bettendorf
Mattice, Roger J., Sioux Rapids
Maughan, John F., Baxter
Mauritz, Emory L., Des Moines (A.M.)
Maxwell, Charles T., Sioux City
Maxwell, John R., Iowa City
May, George A., Forest Grove, Oregon (A.M.)
May, J. T., Cherokee
Mayner, Frank A., Montrose
Mazur, Theodore T., Burlington
Meffert, Clyde B., Cedar Rapids
Megorden, William H., Mount Pleasant
Mehrl, William J., Cascade
Melampy, C. Nelson, Ottumwa
Melgaard, Robert T., Dubuque
Mellen, Robert G., Clinton
Meng, Ralph H., Clarinda
Merillat, Herbert C., Des Moines
Merkel, Byron M., Des Moines
Merritt, Arthur M., Des Moines (L.M.)
Merritt, F. Benjamin, Dubuque
Merritt, James O., Des Moines
Merselis, Harold K., Audubon
*Mershon, Clinton E., Iowa City (L.M.)
Merulla, Charles A., Marion
Meservey, Maynard A., Jr., Des Moines
Meyer, Alfred K., Clinton
Meyer, Robert J., Wellsburg
Meyers, Frank W., Dubuque (L.M.)
Meyers, Paul T., Bloomfield
Meyers, Robert P., Ottumwa
Michaelson, Beryl F., Dakota City
Michaelson, Don, Sac City
Michaelson, Manly, Bellevue
Michel, Gene E., Sac City
Michelfelder, Theodore J., Fort Dodge
Michener, Robert B., Iowa City
Middleton, William H., Cedar Rapids
Mikelson, Clarence J., Waterloo
Miller, Chester I., Iowa City
Miller, Donald F., Williamsburg
Miller, Edward R., Mount Pleasant
Miller, Enos D., Wellman (L.M.)
Miller, Garfield, Calmar
Miller, Herbert P., Jr., Iowa City
Miller, Howard L., Cedar Rapids
Miller, Jay R., Wellman
Miller, Keith E., Agency
Miller, Lawrence A., North English
Miller, Lawrence A. II, North English
Miller, Richard L., Waterloo
Miller, Robert C., Waterloo

Miller, Rodney H., Mason City
Miller, Temple M., Muscatine
Mills, Keith F., Lone Tree
Milroy, Thomas W., Des Moines
Miltner, Leo J., Davenport
Minassian, Thaddeus A., Des Moines (L.M.)
Mincks, James R., Bloomfield
*Miner, James B., Charles City
Minkel, Roger M., Swea City
Mirick, Donald F., Clinton
Mitchell, Claire H., Cincinnati (L.M.)
Mitchell, Duane E., Mount Ayr
Mitchell, Richard C., Waterloo
Moberly, John W., Dubuque
Mochal, John L., Independence
*Moe, Ralph H., Griswold
Moeller, Jay A., Dubuque
Moen, Stanley T., Cedar Rapids
Moermond, James O., Buffalo Center
Moershel, Henry G., Homestead
Moershel, William J., Cedar Rapids
Moessner, Harold, Amana
Moles, Marvin R., Newton
Monahan, Joseph L., Clinton
Monnig, Philip J., Sioux City
★Montgomery, Albert E., New York, New York
Montgomery, George E., Ames
Montgomery, Guy E., Washington
Montz, Fred, Lowden
Moon, Barclay J., Cedar Rapids
Mooney, James C., Des Moines
Moore, Carlyle C., Emmetsburg
Moore, Edson E., Fort Dodge
Moore, Jesse C., Eldon (L.M.)
Moore, Pauline V., Iowa City
Moore, Richard M., Des Moines
Moorehead, Harold B., Underwood
Mordaunt, Richard H., Nevada
Morgan, Dale D., Marion
Morgan, Francis W., Ottumwa
Morgan, Harold W., Mason City
Morgan, Jack N., Fairfield
Morgan, Paul W., Mason City
Morgan, Rex L., Sioux City
Morganthaler, Otis P., Templeton (L.M.)
Moriarty, Darwin L., Council Bluffs
Morrison, John R., Des Moines
Morrison, John W., Alta (L.M.)
Morrison, Robert E., Waterloo
Morrison, Roland B., Carroll
Morrissey, George E., Davenport
Morrissey, William J., Des Moines
Mosher, Martin L., Jr., Iowa City
Motto, Edwin A., Davenport
Mountain, George E., Des Moines
Moyers, Jack, Iowa City
Mueller, Albert C., Iowa City
Mugan, Robert C., Sioux City
Mulry, William C., Keokuk
Mulsow, Frederick W., Cedar Rapids
Munger, Elbert E., Jr., Spencer
Munns, Richard E., Hampton
Murphey, Arlo L., Fredericksburg
Murphy, Cornelius B., Alton
Murphy, George C., Waterloo
Murphy, Robert E., Fort Madison
Murphy, Thomas W., Iowa City
Murray, Frederick G., Cedar Rapids (L.M.)
Murray, Jonathan H., Burlington
Murtaugh, James E., New Hampton
Myerly, William H., Des Moines
Myers, Kermit W., Sheldon
Myers, Robert W., Monticello

Nafziger, Ezra G., Battle Creek
Nakashima, Victor K., Dubuque
Nash, Warren, Waterloo
Neal, Emma J., Cedar Rapids (L.M.)
Nederhiser, Morgan I., Cascade
Needles, Roscoe M., Atlantic
Neff, Herbert, Guthrie Center
Neglia, Fortunato J., Maxwell
Neligh, Gordon L., Jr., Council Bluffs
Nelken, Leonard, Clinton
Nelson, Arnold L., Des Moines
Nelson, F. Lawrence, Ottumwa
Nelson, Leo C., Jefferson
Nelson, Norman B., Iowa City
Nemec, Joseph J., Cedar Rapids
Nemmers, Gerald J., Washington
Netolicky, Robert Y., Cedar Rapids
Neufeld, Robert J., Davenport
Neuzil, William J., Cedar Rapids (L.M.)
Newland, Don H., Belle Plaine
Newland, Donald O., Des Moines
Nicoll, Charles A., Panora
Nicoll, David T., Mitchellville (L.M.)
Nielsen, Arnold T., Ankeny
Nielsen, Glen E., Des Moines
Nielsen, Rudolph F., Cedar Falls
Nielson, Arthur L., Council Bluffs
Nierling, Paul A., Cresco
Nitzke, Everett A., Des Moines
Niver, Edwin O., Clarinda
Noble, Nelle S., Des Moines (L.M.)
Noble, Rusl P., Alta
Nolan, John C., Corning
*Nomland, Ruben, Iowa City
Noonan, James J., Marshalltown
Nord, Donald H., Cambridge
Nordin, Charles A., Des Moines
Nordschow, Carleton D., Iowa City
Norris, Albert S., Iowa City
Norris, Lewis D., Newton
Northup, Maurice L., Humboldt
Norton, Robert E. G., Des Moines
Noun, Louis J., Des Moines
Noun, Maurice H., Des Moines
Noziska, Charles R., Council Bluffs
Nyquist, David M., Eldora

Ober, Frank G., Burlington
O'Brien, Lyal J., Fort Dodge
O'Brien, Stephen A., Mason City (L.M.)
O'Brien, Stephen A., Jr., Dubuque
O'Connor, Edwin C., New Hampton
O'Donnell, Joseph E., Clinton
Oelrich, Carl D., Sioux Center
Oggel, Herman D., Maurice (L.M.)
O'Keefe, Paul T., Waterloo
O'Leary, Francis B., Sibley
Olin, Elvin E., Dubuque
Olsen, Martin I., Des Moines (L.M.)
Olsen, Max E., Minden
Olsen, Ranald E., Milton
Olson, Evelyn M., Winterset
Olson, Stewart O., Des Moines
O'Neal, Harold E., Tipton
Onnen, Dale R., Newton
Orcutt, Paul E., Marion
Orelup, Don N., Albia
Ortmeyer, Donald W., Evansdale
Orton, Lawrence C., Mason City
Osborn, C. Robert, Dexter
Osincup, Paul W., Sioux City
Osten, Burdette H. Northwood
O'Toole, Laurence C., Le Mars
Ottilie, Donald J., Oelwein
Otto, Paul C., Fort Dodge
Overton, Roy W., West Des Moines
Owca, Anthony S., Centerville
Owen, William E., St. Ansgar
Ozaydin, Ismail M., Council Bluffs

Packard, Douglas K., Dubuque
Page, Elizabeth B., Iowa City
Page, Wesley M., Iowa City
Pahlas, Henry M., Dubuque
Paige, Ralph T., LaPorte City
Palmer, Carson W., Guttenberg (A.M.)
Palmer, Howard C., West Liberty
Palumbo, Louis T., Des Moines
Paragas, Modesto R., Creston
Parish, John R., Grinnell
Parke, John, Cedar Rapids
Parker, Loran F., Iowa Falls
Parker, Robert L., Des Moines (L.M.)
Parks, Claude O., Iowa City
Parks, John L., Muscatine
Parson, Victor G., Des Moines
Parsons, John C., Des Moines
Paschal, George A., Webster City
Pascoe, Paul L., Carroll
Patterson, John C., Independence
Patterson, Roy A., Webster City
Paul, John D., Anamosa
Paul, Richard E., Des Moines
Paul, William D., Iowa City
Paulsen, Donald A., Victor
Paulsen, Herbert B., Harris
Paulson, Jerome F., Mason City
Paulus, Edward W., Iowa City
Pearlman, Leo R., Des Moines
Pearson, George J., Burlington
Peart, John C., Davenport
Peasley, Harold R., Des Moines
Peck, Lowell J., Iowa City
Peddie, Harry M. K., Des Moines
Pedersen, Arthur M., Council Bluffs
Pedersen, Paul D., Council Bluffs
Peggs, Harold J., Creston
Peisen, Conan J., Des Moines
Pelz, Werner P., Charles City
Penly, Don H., Cedar Falls
Pennington, Orville J., Dexter (L.M.)
Perel, Ada R., Des Moines
Perkins, Franklyn C., Hedrick
Perkins, Rollin M. II, Davenport
Perley, Arthur E., Waterloo
Perrin, William D., Sumner
Pester, George H., Council Bluffs
Peters, Earl E., Muscatine
Petersen, Donal C., Burlington
Petersen, Emil C., Atlantic
Petersen, Millard T., Atlantic
Petersen, Robert E., Dubuque
Petersen, Vernon W., Clinton
Peterson, Byron E., Mount Pleasant
Peterson, Charles R., Des Moines
Peterson, Elroy R., Ames
Peterson, Evan A., Burlington
Peterson, Frank R., Cedar Rapids
Peterson, John C., Hartley
Peterson, Loren G., Des Moines
Peterson, Ray W., Clear Lake
Peterson, Richard E., Iowa City
Peterson, Richard J., Panora
Pettipiece, Clayton, Sidney
Pfaff, Robert A., Dubuque
Pfeiffer, Donald W., MacGregor
Pfeiffer, Harry E., Riviera Beach, Florida (L.M.)
Pfohl, Anthony C., Dubuque
Phelan, Mary Patricia, Altoona
Phelps, Gardner D., Waterloo
Phelps, Richard E. H., New Sharon
Pheteplace, Willard S., Davenport
Phillips, Albin B., Clear Lake (L.M.)
Phillips, Allan B., Des Moines
Phillips, Clarence P., Muscatine
Phillips, Walter B., Montezuma
Piburn, Marvin F., Des Moines
Piekenbrock, Frank J., Dubuque
Piekenbrock, Thomas C., Dubuque
Piercy, Kenneth C., Ames
Pierson, Lawrence E., Sioux City
Pietrzak, Julius, Cedar Rapids
Ping, Er Chang, Independence
Pitcher, Arlo L., Belmond
Pitluck, Harry L., Laurens
Pittinger, Charles B., Iowa City
Plager, Vernon H., Waterloo
Plankers, Arthur G., Dubuque
Plott, Carol L., Algona
Poepsel, Frank L., West Point
Ponseti, Ignacio V., Iowa City
Poore, Samuel D., Villisca
Porter, Lawrence W., Indianola
Porter, Philip M., New Hampton
Porter, Richard C., Des Moines
Porter, Robert J., Des Moines
Porter, S. Dale, Grinnell
Posner, Edward R., Jr., Des Moines
Posner, Edward R., Sr., Des Moines (L.M.)
Potter, Paul H., Mason City
Powell, Adrian R., Elkader
Powell, Charles W., Cherokee
Powell, Lester D., Des Moines
Powell, Robert A., Shenandoah
Powell, Robert M., Mason City
Powell, Robert V., Kingsley
Powell, William R., Des Moines
Powers, George H., Shenandoah
Powers, Henry R., Emmetsburg
Powers, Ivan R., Waterloo
Powers, John L., Estherville
Powers, William J., Vinton
Preacher, Charles B., Davenport
Preece, Wade O., Waterloo
Prescott, Kenneth H., Storm Lake
Presnell, William H., Charlotte
Prewitt, Leland H., Ottumwa
Priestley, Joseph B., Des Moines
Proctor, Rothwell D., Cedar Rapids
Prouty, James V., Cedar Rapids
Province, William, Jr., Dubuque
Ptacek, Joseph L., Webster City
Pugh, Philip F. H., Sioux City
Pumphrey, Loira C., Keokuk
Puntenney, Andrew W., Boone
Purdy, William O., Des Moines

Quetsch, Richard M., Cedar Rapids

Radcliffe, Christian E., Iowa City
Radicia, Lucy M., Council Bluffs
Rahn, Gordon E., Mount Vernon
Rainy, Curtis W., Elma
Ralston, Furman P., Knoxville
Ramsdell, Stuart T., Clarinda
Randall, Ross G., Waterloo
Randall, William L., Hampton
Randolph, Aaron P., Anamosa
Rankin, Isom A., Iowa City
Rankin, John R., Keokuk
Rankin, William, Keokuk (L.M.)
Rater, David L., Ottumwa
Rathe, Herbert W., Waverly
Rathe, James W., Iowa City
Rausch, Gerald R., Sioux City
Ravreby, Mark D., Des Moines
Read, Charles H., Iowa City

Reading, Donald S., Marshalltown
Readinger, Harry M., New London
Redfield, Earl L., Des Moines
Redmond, James J., Cedar Rapids
Reed, Robert J., Des Moines
Reeder, James E., Sioux City (L.M.)
Reeder, James E., Jr., Sioux City
Reedholm, Edwin A., Grundy Center
Reeds, Ralph E., Jr., Spirit Lake
Reibold, Frank W., Carroll
Reimers, Robert S., Fort Madison (L.M.)
Rembolt, Raymond R., Iowa City
Rence, William G., Mason City
Resinger, Harold E., Des Moines
Reuber, Roy N., Mason City
Reuling, Frank H., Waterloo
Rhodes, John M., Pocahontas
Rice, Floyd W., Des Moines (L.M.)
Richard, Clysta A., Iowa City
Richards, Richard D., Iowa City
Richardson, Francis H., Council Bluffs
Richey, Granville L., Centerville
Richmond, Arthur C., Fort Madison
Richmond, Frank R., Fort Madison
Richmond, Frank R., Jr., Fort Madison
Richmond, Paul C., New Hampton
Richter, Harold J., Albia
Rider, Harmon E., Philadelphia, Penn.
Ridenour, Edward J., Waterloo
*Ridenour, Joseph E., Waterloo (L.M.)
Riegelman, Ralph H., Des Moines
Rienits, John H., Cedar Rapids
Riggert, Leonard O., Clinton
Rimel, George W., Bedford
Rindskopf, Wallace, Des Moines
Ringdahl, Irving, Roland
Ritter, Eugene F., Centerville
Ritter, John A., Ottumwa
Robb, William J., Cedar Rapids
Roberts, Charles R., Dysart
Roberts, Francis M., Knoxville (L.M.)
Roberts, Justus B., Ottumwa
Robertson, Treadwell A., West Liberty
Robinson, Ray G., State Center
*Robinson, Robert E., Waverly (L.M.)
Robinson, Van C., Des Moines
Rock, J. Gordon, Davenport
Rock, John E., Davenport
Rock, William K., Waterloo
Rockwell, Maryelda, Clinton
Rodabaugh, Kenneth D., Tabor
Rodawig, Don F., Spirit Lake
Rodawig, Donald F., Jr., Spirit Lake
Roddy, Harold J., Mason City
Rodemeyer, Frederick H., Sheffield (L.M.)
Rodgers, George H., Mount Ayr
Rogers, Claude B., Earlville (L.M.)
Rohlf, Edward L., Jr., Waterloo
Rohner, William L., Iowa City
Rohrbacher, William M., Iowa City
Rohwer, Roland T., Sioux City
Rolfs, Floyd O., Parkersburg
Rolfs, Fred A., Aplington
Romano, Anthony M., Minden
Romero, José M., Des Moines
Rominger, Clark R., Waukon
Rominger, Clark W., Waukon (L.M.)
Rooney, Joseph M., Algona
Rose, Alvin A., Story City (L.M.)
Rose, Joseph E., Grundy Center
Rosebrook, Lee E., Ames
Rosendorff, Charlotte, Davenport
Ross, Arthur J., Jr., Perry
Rost, Glenn S., Lake City
Rotkow, Maurice J., Des Moines
Roudybush, William B., Muscatine
Roules, J. Frederic, Mediapolis
Rovine, Byron W., Davenport
Rowan, Theodore, Des Moines
Rowley, Robert D., Burlington
Rowley, William G., Sioux City (L.M.)
Rowney, George W., Sioux City
Royal, Lester A., West Liberty (L.M.)
Royal, Malcolm A., Des Moines (L.M.)
Rozeboom, Earl G., Winterset
Rudersdorf, Howard E., Sioux City
Rusk, Ross P., Dubuque
Russell, Elwood P., Burlington
Russell, John, Santa Barbara, California (L.M.)
Russell, Ralph E., Waterloo
Rust, Emery A., Webb (L.M.)
Ruth, Verl A., Des Moines
Ryan, Allen J., Harlan
Ryan, Cyril J., Bettendorf
Ryan, James W., Jr., Des Moines
Ryan, Martin J., Sioux City
Ryan, Robert A., Fairfield

Saar, Jesse L., Donnellson
Saar, Jesse L., Jr., Burlington
Saar, John W., Keokuk
Safley, Max W., Forest City
Sahs, Adolph L., Iowa City
Sampson, Carl E., Creston
*Sampson, Frank E., Creston (L.M.)
Samter, Bernhard, Mount Pleasant
Sanders, George E., Miami, Florida (L.M.)
Sanders, Matthew G., Fort Dodge
Sanders, William E., Tucson, Arizona (L.M.)
Sands, Sidney L., Des Moines
Sands, W. Wayne, Des Moines
Sarff, Floyd G., Logan
Sartor, Guido J., Mason City
Satrang, Geraldine, Sioux City
Sattler, Dwight G., Kalona
Sauer, Harold E., Marshalltown
Saul, F. William, Mason City
Sautter, Richard D., Iowa City
Sautter, Robert A., Mount Vernon
Sawyer, Grace M., Woodward
Scanlan, George C., Clinton
Scanlon, George H., Iowa City
Schacht, Norman A., Fort Dodge
Schaefer, Paul H., University City, Missouri (L.M.)
Schaeferle, Lawrence G., Gladbrook
Schaeferle, Martin J., Eagle Grove
Schafer, Leander H., DeWitt
Schaffner, Rome L., Cedar Rapids
Scharle, Theodore, Dubuque
Scheffel, Melvin L., Malvern
Scheibe, John R., Bloomfield
Schill, Austin E., Des Moines
Schissel, Donald, Des Moines
Schlaser, Verne L., Des Moines
Schlichtemeier, Ellis O., Spencer
Schmidhofer, Ernst, Eldora
Schmiedel, Edward E., Charles City
Schmitt, Donald D., Ringsted
Schnug, George E., Dows (L.M.)
Scholl, Charles R., Cedar Rapids
Schoonover, Richard, Bloomfield
Schrier, Harold L., Fort Madison
Schrock, Christian E., Iowa City
Schroeder, Adrian J., Marshalltown
Schroeder, Leslie V., Walcott
Schropp, Rutledge C., Des Moines
Schueller, Charles J., Dubuque
Schultz, Gerald T., Iowa City
Schultz, Ivan T., Humboldt
Schultz, Nelle E. T., Humboldt
Schumacher, Donald R., Clinton
Schupp, Joseph G., Jr., Des Moines
Schutter, John M., Algona
Schwartz, Charles, Cedar Rapids
Schwartz, John W., Sioux City
Sciortino, Aileen E. Mathiasen, Council Bluffs
Sciortino, Arthur L., Council Bluffs
Scott, Paul W., Ottumwa
Scott, Phillip A., Spirit Lake
Scoville, Victor T., Sioux City
Sear, John, Alden
Sebek, Roy O., Fort Dodge
Sedlacek, Leo B., Cedar Rapids
Sedlacek, Richard L., Cedar Rapids
Sedlacek, Robert A., Cedar Rapids
Seebohm, Paul M., Iowa City
Seely, Harmon D., Cherokee
Seibert, Cecil W., Waterloo
Seidler, William A., Jr., Jamaica
Sells, Benjamin B., Independence (L.M.)
Selo, Rudolph A., Council Bluffs
Senft, Otto E., Monticello
Sensenig, David M., Iowa City
Senska, Frank R., Iowa City (A.M.)
Senty, Elmer G., Davenport
Severson, George J., Slater (L.M.)
Severson, Wayne L., Slater
Shafer, Arthur W., Davenport
Shagass, Charles, Iowa City
Shank, Raymond A., Cedar Rapids
Sharpe, Donald C., Dubuque
Shaw, David F., Britt
Shaw, Robert E., Waverly
Shea, Thomas E., Storm Lake
Sheehan, Daniel J., Cherokee
Sheeler, Ivan H., Marshalltown
Sheets, Raymond F., Iowa City
Shelton, Charles D., Bloomfield (L.M.)
Shepherd, Loyd K., Des Moines
Sherman, Richard C., Los Angeles, California (L.M.)
Sherman, Robert B., Ackley
Shiffler, H. Kirby, Des Moines
Shinkle, William C., Des Moines
Shohet, Isaac H., Bode
Shope, Charles D., Greenfield
Shorey, Joseph R., Davenport
Shulman, Herbert, Waterloo
Shultz, William T., Marshalltown
Shurts, John J., Eldora
Sibley, Edward H., Sioux City
Sibley, John A., Ames
Silk, Marvin, Des Moines
Simpson, Roger A., Iowa City
Simmons, Ralph R., Des Moines (A.M.)
Singer, John R., Newton
Singer, Siegmund F., Ottumwa
Sinn, Irvin J., Williamsburg
*Sinning, Augustus, Wilton Junction (L.M.)
Sinning, John E., Marshalltown
Sisk, James A., Waterloo
Sitz, Edward J., Davenport
Skallerup, Glenn M., Red Oak
Skelley, Paul B., Jr., Dubuque
Skopec, Francis M., Cedar Rapids
Skultety, F. Miles, Iowa City
Skultety, James A., Des Moines
Sloan, Fred R., Waterloo
Sloan, Frederic J., Cedar Rapids
Sloan, Morris G., Des Moines
Sloan, Roy C., Mount Pleasant
Sloterdyk, Yme, Knoxville
Smazal, Stanley F., Davenport
Smead, Leslie L., Newton (L.M.)
Smiley, George W., Ottumwa
Smiley, Ralph E., Mason City
Smith, Alfred N., Des Moines
Smith, Andrew C., Waterloo
Smith, Andrew D., Primghar
Smith, Anthony P., Jewell
Smith, Arthur F., Manning
Smith, Cecil R., Wyoming
Smith, Clyde J., Gilmore City
Smith, Elmer M., Eagle Grove
Smith, Eugene, Waterloo
Smith, Herman J., Des Moines
Smith, Ian M., Iowa City
Smith, J. Lawrence, Iowa Falls
Smith, J. Ned., Iowa City
Smith, John E., Clarence (L.M.)
Smith, Lawrence D., Des Moines
Smith, Richard T., Iowa City
Smith, Richard W., Clarion
Smith, Robert A., Albia
Smith, Robert J., Stacyville
Smith, Robert T., Granger
Smith, Rodger B., Mason City
Smith, S. Rodmond, Red Oak
Smith, Sidney A., Oskaloosa
Smrha, James A., Cedar Rapids
Smythe, Arnold M., Des Moines
Snyder, Gregg M., Ottumwa
Snyder, Raleigh R., Des Moines (L.M.)
Sohm, Herbert A., Des Moines
Sokol, Charles R., State Center
Sones, Clement A., Des Moines
Soper, Robert T., Emmetsburg
Sorensen, Elmer M., Red Oak
Sorenson, Aral C., Davenport
Sorenson, Kermit R., Sabula
Southwick, William W., Marshalltown
Spear, William, Oakdale
Spearing, Joseph H., Harlan
Speers, James F., Des Moines
Spellman, George G., Sioux City
Spencer, John H., Muscatine
Spencer, William A., Osage
Sperow, Wendell B., Nevada
Sperry, Frederick S., Clarinda
Spevak, Jack J., Des Moines
Spilman, Harold A., Ottumwa
Spohnheimer, L. Nelson, Leon
Springer, Floyd A., Des Moines
Stalford, John H., Los Angeles, California (L.M.)
Stamler, Frederic W., Iowa City
Stansbury, John E., Santa Barbara, California (A.M.)
Staples, Lawrence F., Iowa City
Stark, Callistus H., Cedar Rapids
Stark, Frederick M., Sioux City
Starr, Charles F., Mason City (L.M.)
Starry, Allen C., Sioux City (A.M.)
Stauch, Martin O., Moorhead
Stauch, Omar A., Sioux City
Steenrod, Emerson J., Iowa Falls
Steffens, Lincoln F., Dubuque
Steffey, Fred L., Keokuk
Stegmaier, Otto C., Davenport
Stegman, Jacob J., Marshalltown
Stephen, Paul, Cedar Rapids
Stephen, Raymond J., Cedar Rapids
Stepp, James K., Manchester
Sternagel, Fred, West Des Moines
Sternberg, Walter A., Corona Del Mar, California (L.M.)
Sternhill, Isaac, Council Bluffs
Stevens, Clark W., Dubuque

Steves, Richard J., Des Moines
Stewart, John H., Ottumwa
Stewart, John K., Clinton
Stickler, Robert B., Des Moines
Stimac, Emil M., Davenport
Stinard, Charles D., Glenwood
Stinson, Alice C., Estherville (L.M.)
Stitt, Paul L., Fort Dodge
Stoakes, Charles S., Lime Springs (L.M.)
Stober, Raymond W., Charles City
Stoikovic, Joseph P., Burlington
Stomel, Joseph, Anamosa
Stone, Daniel B., Iowa City
Storck, Robert D., Dubuque
Strand, Clarence M., Dubuque
Strathman, Lawrence C., Shenandoah
Straub, Joseph J., Dubuque
Straumanis, Janis, Solon
Strawn, John T., Vinton (L.M.)
Strong, Kirk H., Fairfield
Stroy, Donald T., Council Bluffs
Stroy, Herbert E., Osceola
Stuart, Percy E., Nashua (L.M.)
Stueland, Alvin J. R., Mason City
Stuelke, Richard G., West Branch
Stumme, Ernest H., Denver
Suchomel, Thomas F., Cedar Rapids
Sullivan, Daniel J., Dubuque
Sullivan, John E., Des Moines
Sullivan, John V., Carroll
Sulzbach, John F., Burlington
Summers, Thomas B., Des Moines
Sun, Kuei shu, Ames
Sunderbruch, John H., Davenport
Sunner, Gerald C., Marion
Sutton, Gerald H., Jr., Boone
Svendsen, Reinert N., Keokuk
Swanger, Carroll E., Woodward
Swann, Raymond O., Fort Dodge
Swanson, Eric M., Fort Dodge
Swanson, Gerald W., Lamoni
Swanson, Keith R., Hull
Swanson, Leslie W., Mason City
Swayze, V. Warren, Muscatine
Sweeney, Lloyd J., Sanborn
Swift, Frederick J., Jr., Maquoketa
Swift, Frederick J., Sr., Maquoketa (L.M).
Synhorst, John B., Des Moines (A.M.)
Sywassink, George A., Muscatine

Tabor, James R., Iowa City
Tait, John H., Des Moines
Tamisiea, Francis X., Missouri Valley
Taylor, Charles B., Claremont, California (L.M.)
Taylor, Donald E., Stuart
Taylor, James H., Clinton
Taylor, Lawrence A., Ottumwa
Taylor, Maude, Ottumwa (L.M.)
Taylor, Robert S., Davenport
Taylor, Wendel W., Sheffield
Teigland, Joel D., Des Moines
Telfer, William L., Waterloo
Teufel, John C., Davenport (L.M.)
Thaler, David, Cedar Rapids
*Tharp, Herbert M., Monroe
Thatcher, Wilbur C., Fort Dodge
Theilen, Ernest O., Iowa City
Theisen, Roy I., Dubuque
Thielen, Edward W., Waterloo
Thielen, John B., Fonda
Thoman, William S., Sioux City
Thomas, Clyde E., Keystone
Thomas, Colin G., Monticello
Thomas, Gary L., Sacramento, California
Thomas, James H., Sibley
Thompson, E. Dean, Jefferson
Thompson, Howard E., Dubuque (L.M.)
Thompson, James R., Waterloo (L.M.)
Thompson, Kenneth L., Oakland
Thompson, Virginia D., Des Moines
Thomsen, John G., Des Moines
Thorburn, Oral L., Ames
Thornton, F. Eberle, Des Moines
Thornton, George H. M., Iowa City
Thornton, John W., Lansing
Thornton, Thomas F., Waterloo
Thornton, Thomas F., Jr., Waterloo
Thorson, John A., Dubuque
Throckmorton, J. Fred, Des Moines
Throckmorton, Jeannette D., Des Moines (L.M.)
Throckmorton, Scott L., Chariton
Throckmorton, Tom B., Des Moines (L.M.)
Throckmorton, Tom D., Des Moines
Tice, Claude B., Mason City (L.M.)
Tice, George I., Mason City
Tice, W. Arnold, Waterloo
Tidrick, Robert T., Iowa City
Tiedeman, John P., Sioux City
Tierney, Edmund J., Sioux City
Tierney, James M., Carroll
Todd, Donald W., Guthrie Center
Todd, Robert L., Burlington
Tolliver, Hillard A., Charles City
Top, Franklin H., Iowa City
Toubes, Abraham A., Des Moines
TouVelle, Alwyn R., Bettendorf
Towle, Robert A., Davenport
Tracy, John S., Sioux City
Trafton, Harold F., Council Bluffs
Traister, John E., Eddyville (L.M.)
Trefz, Donald L., Nashua
Trey, Bernard L., Marshalltown
Treynor, Jack V., Council Bluffs
Trier, Paul J., Des Moines
Tripp, Richard C., Fort Dodge
Trotzig, Joseph P., Akron
Troxel, John F., Cedar Rapids
Troxell, Millard A., Cedar Rapids
Trueblood, Clare A., Indianola
Trumpe, William D., Cedar Rapids
Trunnell, Thomas L., Waterloo
Turner, Howard V., Des Moines
Turner, James H., Fairfield
Turner, Rosalie C., Nashua
Turner, Roy M., Armstrong
Tyler, Donald E., Fort Dodge
Tyrrell, John E., Manchester

Uchiyama, John K., Des Moines
Underriner, Robert E., Holstein
Updegraff, Charles L., Boone
Updegraff, Robert R., Des Moines
Updegraff, Thomas R., Waterloo
Urich, Vernon C., Coralville
Utne, John R., Mason City

Valiquette, Frank G., Sioux City
Van Allen, Maurice W., Iowa City
Van Bemmel, Piet F., Ames
Van Camp, Thomas H., Breda
Vander Meulen, Herman C., Pella
Vander Stoep, Harry L., Le Mars
Van Epps, Clarence E., Phoenix, Arizona (L.M.)
Van Epps, Eugene F., Iowa City
Vangsness, Ingmar C., Sioux City
Van Hecke, David C., Iowa City
Van Metre, Paul W., Rockwell City (L.M.)
Van Natta, Carlton W., West Des Moines
Vannix, George L., Burlington
Van Patten, E. Martin, Fort Dodge
Van Tiger, William H., Eldora (A.M.)
Van Werden, Benjamin D., Keokuk
Van Wetzinga, Russell J., Bettendorf
Van Zante, Peter, Pella
Van Zee, Gene K., Pella
Vaubel, Ellis K., Estherville
Vaughan, William R., New London
Vaughn, Vincent J., Ottumwa
Vegars, Stanley H., Mason City
Veldhouse, Richard H., Cedar Rapids
Veley, Robert W., Cedar Rapids
Vercio, Raymond A., Burlington
Vernon, Robert G., Dubuque
Vespa, Raymond, Des Moines
Victorine, Edward M., Cedar Rapids
Viner, Thomas R., Leon
Vineyard, Thomas L., Ottumwa
Voigt, Ernest J., Burlington (A.M.)
Voigt, Franz O. W., Oskaloosa
von Lackum, J. Kenneth, Cedar Rapids
Vorhes, Carl E., Sheldon
Vorisek, Elmer A., Des Moines
Vosika, Edward J., Washington
Voss, Otto R., Davenport (L.M.)

Waggoner, Charles V., Clinton
Wagner, Donald J., Sioux City
Wagner, Eugene C., Plainfield
Wahrer, Frederick L., Marshalltown
Wainwright, Max T., Sioux City
Waldorf, Richard D., Waterloo
Walker, Charles C., Des Moines (L.M.)
Walker, Glenn L., Burlington
Walker, Herbert P., Clarion (L.M.)
Walker, John R., Waterloo
Walker, Thomas G., Riceville
Walker, Thomas S., Riceville (L.M.)
Wall, David, Ames
Wall, John M., Boone
Wallace, Leo F., Burlington
★Walsh, Eugene L. Huntington, West Virginia
Walsh, William E., West Union
Walston, Edwin B., Des Moines (L.M.)
Walston, James H., Sioux City
Walter, Dennis J., Des Moines
Walton, Seth G., Hampton
Walz, Donald V., Iowa City
Wanamaker, A. Roy, Hamburg
Ward, Donovan F., Dubuque
Ward, Loraine W., Oelwein
Warden, Duane D., Council Bluffs
Ware, John, Mount Vernon
Ware, Stephen C., Iowa City
Ware, Thomas A., Sioux City
Warner, Emory D., Iowa City
Warner, Paul L., Wesley
Waterbury, Charles A., Jr., Waterloo
Watson, Charles F., Fairfield
Watson, Elbert J., Creston (L.M.)
Watt, Russell H., Marshalltown
Watters, George H., Des Moines
Watts, A. Fred, Creston
Watts, Campbell F., Cedar Rapids
Watts, Clyde F., Marengo
Weaver, David F., Davenport
Weaver, Kenneth H., Union
Weaver, Ralph L., Cumberland
Webb, Daniel R., Oakdale
Webb, James B., Ottumwa
Weber, Frank N., Walnut
Weber, William W., Pomeroy
Weems, Nev E., Paullina
Weideman, Don C., Vinton
Weih, Elmer P., Clinton
Weinberg, Harry B., Davenport
Weingart, Julius S., Des Moines (L.M.)
Weis, Howard A., Davenport
Weland, Regis E., Cedar Rapids
Wellman, Thomas G., Clinton
Wells, Rodney C., Marshalltown
Wentworth, Laydon S., Marble Rock
Wentzien, Albert J., Tama
Werner, Harold T., Fort Madison
Wessels, William R., Marshalltown
West, Alroy G., Council Bluffs
West, Norman D., Avoca
West, Walter E., Centerville (L.M.)
Westerlund, Roger L., Iowa City
Westly, G. Travis, Mason City
Westly, J. Stephen, Mason City
Weston, B. Raymond, Mason City
Weston, Robert A., Des Moines (L.M.)
Wetrich, Max F., Grand Junction
Wettach, Robert S., Mount Pleasant
Weyhrauch, Robert A., Waterloo
Weyer, Joseph J., Fort Dodge
Wheeler, Richard A., Des Moines
Whitaker, Ben T., Boone
White, Charles E., Independence
White, George H., Des Moines
White, Newton B., Hampton
Whitehouse, William K., Ottumwa
Whitehouse, William N., Ottumwa
Whitley, Ralph L., Osage (L.M.)
Whitmer, Lysle H., Muscatine
Whitmire, James E., Sumner
Wichern, Homer E., Des Moines
Wicklund, Maurice M., Waterloo
Wicks, Ralph L., Boone
Widmer, James G., Wayland
Widmer, Reuben B., Winfield
Wiedemeier, Joseph L., Sioux City
Wigdahl, Lowell C., Emmetsburg
Wilcox, Delano, Malcom (L.M.)
Wilcox, Dwain E., Atlantic
Wilcox, Edgar B., Oskaloosa (L.M.)
Wilcox, Keith E., Muscatine
Wilcox, Kenneth M., Fort Dodge
Wilcox, Robert A., Iowa City
Wildberger, William C., Perry
Wilhelmi, Raymond W., Sioux City
Wiley, Alden F., Waukon
Wilke, Frank A., Perry
*Wilkinson, Levi J., Marshalltown (L.M.)
Willett, Wilton J., Manchester
Williams, Lawrence B., Maquoketa
Williams, M. Neil, Des Moines
Williams, Thomas L., Cherokee
★Williamson, Billy J., Millington, Tennessee
Wilson, Charles R., Manson
Wilson, F. Dale, Davenport
Wilson, Frederic L., Sioux City
Wilson, Frederic W., Sioux City
Wilson, Robert G., Missouri Valley
Wilson, William R., Iowa City
Winder, Clifford D., Waterloo
Winninger, Louis T., Waterloo
Winter, F. Donald, Burlington
Wirtz, Dwight C., Des Moines
Wise, Arthur C., Iowa City
Wise, James H., Cherokee
Wohlwend, Edward B., Iowa City
Wolcott, Ruth F., Spirit Lake
Wolf, Henry H., Elgin
Wolf, William J., West Union
Wolfe, Otis D., Marshalltown

Wolfe, Russell W., Marshalltown
Wolfe, Wilson C., Ottumwa
Wolpert, Paul L., Onawa
Wolters, Donald E., Estherville
Wolverton, Benjamin F., Cedar Rapids
Wood, John P., Des Moines
*Wood, John R., Wadena (A.M.)
Woodard, Ralph E., Fort Dodge
Woodburn, Chester C., Jr., Des Moines
Woodhouse, Keith W., Cedar Rapids
Woodward, Arthur W., Waterloo
Wooters, Richard C., Des Moines
Wormhoudt, Herbert L., Ottumwa
Worrell, James T., Keosauqua
Wray, Clarence M., Iowa Falls (L.M.)
Wray, Robert M., Cedar Rapids
Wright, David W., Decorah
Wright, Thomas D., Newton
Wright, Thomas G., Marion
Wubbena, Arthur C., Rock Rapids
Wurtzer, Ezra L., Clear Lake (A.M.)
Wyatt, George M., Iowa City
Wykoff, Sarah U., Des Moines

Yancey, C. Corbin, Sioux City
Yein, Chung Sung, Waterloo
Yetter, William L., Iowa City
Yocum, Albert L., Chariton (L.M.)
York, Dallas L., Creston
Young, Donald C., Des Moines
Young, Ernest R., Dubuque (L.M.)
Young, George G., Des Moines
Young, Howard O., Marion (L.M.)
Young, James J., Clinton
Young, Richard A., Clarion
Yugend, Sidney F., Indianola
Zabloudil, Warren C., Preston
Zager, Lewis L., Waterloo
Zelinskas, Leonard P., Dubuque
Zellweger, Hans, Iowa City
Zibilich, George J., Lone Tree
Ziebell, William C., Iowa City
Ziffren, Sidney E., Iowa City
Zimmerer, Edmund G., Des Moines
Zimmerman, George R., Iowa City
Zink, Oscar C., Iowa City
Zoeckler, Samuel J., Des Moines
Zoutendam, Ronald L., Sheldon
Zukerman, Cecil M., Davenport

★Military Service
*Deceased
(L.M.) Life Member
(A.M.) Associate Member

FIFTY YEAR CLUB MEMBERS

JUNE 15, 1960

Acher, Albert E. Fort Dodge

Baldwin, Leon A. Riverton
Barbour, Howard W. Mason City
Barr, Guy E. Sioux City
Bartlett, George E. New Sharon
Behrens, George W. Davenport
Bell, Edward P. Pleasantville
Bernard, Ransom D. Ames
Bierring, Walter L. Des Moines
Boice, Clyde A. Washington
Boiler, William F. Iowa City
Bowers, Arthur S. Orient
Bowie, Louis L. Zearing
Bruce, James H. Fort Dodge
Bullock, William E. Lake Park
Burbank, Dean S. Pleasantville
Burcham, Thomas A. Des Moines

Cantwell, John D. Davenport
Carlile, Amos W. Manning
Carson, Andros Des Moines
Chase, William B., Sr. Des Moines
Chittum, John H. Wapello
Clasen, Henry W. Littleton, Colo.
Closson, Charles L. Walker
Cole, Elmer J. Woodbine
Conmey, Roy M. Sergeant Bluff
Cooper, Gladys A. Lansing, Mich.
Cooper, Jay C. Villisca
Crain, Mattie M. Deep River
Cressler, Frank E. Churdan
Cretzmeyer, Francis X. Emmetsburg
Crew, Arthur E. Marion
Crow, George B. Burlington

Day, Philip M. Oskaloosa
Dean, William F. Osceola
Decker, Jay C. Sioux City
Dolmage, George F. Buffalo Center
Downing, Leroy M. Cedar Rapids
Dulin, Tarana J. G. Iowa City

Ennis, Harry H. Manchester

Foulk, Frank E. Backus, Minn.
French, Royal F. Marshalltown

Gardner, John R. Lisbon
Gearhart, George W. Springville
Gillmor, Benjamin F. Red Oak
Goodenow, Sidney B. Colo
Gray, John F. Melcher
Gutch, Roy C. Chariton

Hamilton, Benjamin F. Jefferson
Hansen, Robert R. Marshalltown
Harken, Conreid R. Osceola
Harkness, Gordon F. Davenport
Harrington, Burton Cedar Rapids
Harris, Ray R. Dubuque
Heady, Conda C. C. Bloomfield
Hennessy, Felix A. Calmar
Hickenlooper, Carl B. Winterset
Hickman, Charles S. Centerville
Hill, James W. Mount Ayr
Hoffman, Paul M. Tipton
Hollis, Edward L. Marengo
Houser, Cass T. Cedar Rapids
Housholder, Harold A. Winthrop
Howell, Elias B. Ottumwa
Hudek, Joseph W. Garnavillo

Ihle, Charles W. Cleghorn

Jackson, James M. Jefferson
Jaenicke, Kurt Clinton
James, Lora D. Fairfield
James, Peter E. Audubon
Janse, Phillip V. Algona
Jarvis, Harry D. Chariton
Jenkins, George A. Albia
Jones, Charles L. Gilmore City
Jones, Harry J. Cedar Rapids

Kahler, Hugo V. Reinbeck
Keech, Roy F. Cedar Rapids
Keeney, George H. Mallard
Kennedy, Elizabeth Smith Oelwein
Kern, Lester C. Waverly
Keyser, Ralph E. Marshalltown
Kimball, John E. West Liberty
Knox, James M. Cedar Rapids
Kyle, William S. Washington

Loes, Anthony M. Dubuque
Losh, Clifford W. Des Moines
Luke, Edward Washington, D. C.

McCall, John H. Allerton
McClean, Earl D. Des Moines
McDowall, Gilbert T. Gladbrook
McFarland, Guy E., Sr. Ames
McHugh, Charles P. Sioux City

Magee, Emery E. Waterloo
Maplethorpe, Charles W., Sr. Toledo
Merritt, Arthur M. Des Moines
Meyers, Frank W. Dubuque
Miller, Enos D. Wellman
Mitchell, Claire H. Cincinnati
Morrison, John W. Alta
Murray, Frederick G. Cedar Rapids

Neal, Emma J. Cedar Rapids
Neuzil, William J. Cedar Rapids
Nicoll, David T. Mitchellville

O'Brien, Stephen A. Mason City
Oggel, Herman D. Maurice
Olsen, Martin I. Des Moines

Parker, Robert L. Des Moines
Pfeiffer, Harry E. Riviera Beach, Fla.
Phillips, Albin B., Sr. Clear Lake
Posner, Edward R. Des Moines

Rankin, William Keokuk
Reeder, James E., Sr. Sioux City
Reimers, Robert S. Fort Madison
Rodemeyer, Frederick H. Sheffield
Rogers, Claude B. Earlville
Rominger, Clark W. Waukon
Rose, Alvin A. Story City
Rowley, William G. Sioux City
Royal, Lester A. West Liberty
Royal, Malcolm A. Des Moines
Rust, Emery A. Webb

Sanders, William E. Tucson, Ariz.
Schnug, George E. Dows
Sells, Benjamin B. Independence
Severson, George J. Slater
Shelton, Charles D. Bloomfield
Smead, Leslie L. Newton
Smith, John E. Clarence
Snyder, Raleigh R. Des Moines
Sternberg, Walter A. Corona Del Mar, Calif.
Stinson, Alice C. Estherville
Stoakes, Charles S. Lime Springs
Stuart, Percy E. Nashua

Taylor, Maude Ottumwa
Teufel, John C. Davenport
Throckmorton, Jeannette Dean Des Moines
Throckmorton, Tom B. Des Moines
Traister, John E. Eddyville

Van Epps, Clarence E. Phoenix, Ariz.
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Watson, Elbert J. Creston
Weingart, Julius S. Des Moines
Westenberger, Joseph C. St. Ansgar
Weston, Robert A. Des Moines
Whitley, Ralph L. Osage
Wilcox, Edgar B. Oskaloosa
Wray, Clarence M. Iowa Falls

Yocum, Albert L. Chariton
Young, Ernest R. Dubuque
Young, Howard O. Cedar Rapids

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*Mrs. E. L. Bower, Guthrie Center....1930
*Mrs. Channing Smith, Granger....1931
*Mrs. P. M. McLaughlin, Sioux City....1932
Mrs. W. A. Seidler, Jamaica....1933
Mrs. J. A. Downing, Des Moines....1934
Mrs. M. C. Hennessy, Iowa City....1935
Mrs. C. A. Boice, Washington....1936
*Mrs. S. E. Lincoln, Des Moines....1937
Mrs. D. W. Harman, Glenwood....1938
Mrs. E. A. Hanske, Bellevue....1939
Mrs. E. T. Warren, Stuart....1940
Mrs. W. R. Hornaday, Des Moines....1941
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Mrs. S. S. Westly, Manly....1945
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*Mrs. L. A. Coffin, Farmington....1952
Mrs. E. B. Hoeven, Ottumwa....1953
Mrs. L. R. Hegg, Rock Valley....1954
Mrs. C. H. Flynn, Clarinda....1955
Mrs. D. H. King, Spencer....1956
Mrs. J. F. Gerken, Waterloo....1957
Mrs. H. C. Merillat, Des Moines....1958
Mrs. E. A. Larsen, Centerville....1959

*Deceased

The Eleventh Hour

CHESTER LAUCK

HOUSTON, TEXAS

At the Second World Medical Association meeting in Switzerland in 1948, an Irishman said in substance, "When an individual is indoctrinated with the philosophy that he no longer has a responsibility to himself or his family, you are striking at the very roots of democracy. When you turn to government for everything, free enterprise is lost. If you accept this philosophy, then you must change your religious concepts. You can no longer believe in a God-made heaven in the hereafter; you must believe in a man-made heaven here on earth and let me admonish you to be very, very sure that the guardian angels in the man-made heaven don't turn out to be the secret police." We must learn that there is no such thing as something for nothing. There seems to be a widespread delusion existing today that money coming from Washington, for some strange reason, doesn't cost anybody anything.

America is riding the crest of a wave of prosperity never before dreamed of on this earth. Although we represent about six per cent of the world's population and seven per cent of the world's land area, we produce and consume over one-third of the world's goods and services. We manufacture nearly one-half of the world's products.

Yet, in spite of this prosperity, we suddenly find ourselves 295 billion dollars in debt. We owe more money in this country than all the other nations on earth put together. Why? Simply because we have been spending more than our income. We have become involved in a deficit spending program for a number of years because people will not realize that the government does not have a stockpile of funds back in Washington which they can dispense or distribute at will.

Thomas Jefferson, in 1816, said "I place economy among the first and most important of Republican virtues and public debt as the greatest of the dangers to be feared."*

Andrew Jackson said in 1824, ". . . If a national debt is considered a national blessing, then we can get on by borrowing, but, as I believe, it is a national curse. My vow would be to pay the national debt."

In 1932, Franklin Delano Roosevelt said "Let us have the courage to stop borrowing to meet continuing deficits. Stop the deficit."

Mr. Khrushchev has declared that the Soviet Union no longer expects to defeat the United States on the battlefield of the military but rather has elected to destroy us on the battlefield of economy. The Russians are aiming directly at the strength and stability of our American dollar. It is their hope that we will spend ourselves into bankruptcy and if we continue our deficit spending program, we are aiding and abetting their cause.

WE, OURSELVES, ARE TO BLAME

Washington is not entirely at fault. Let's put the blame where it belongs—on ourselves. We have not assumed our responsibility of citizenship. WE ASKED FOR IT! Every project we undertake —whether it is for a rural community, a village, city, county, or state, or whether the project be an overpass, underpass, bridge, airport, or even urban renewal—the first question usually asked is, "How much government aid can we get?" It is generally asked without any regard or consideration as to where the funds might be coming from.

We have forgotten how to do things for ourselves. We forgot that with grants-in-aid come government controls, and with government controls we cannot embrace the free and competitive enterprise system—the system that brought about this prosperity and made America so outstandingly great. William Graham Sumner said it: "He who depends upon the state for protection, must pay for it by limitations on liberty. By every new demand which he makes upon his government, he increases its function and the burden of it on himself."

Last year we spent 83 billion dollars, including 43 billion dollars on national defense. We want national defense at any cost—even with the waste. But let's talk about the other 40 billion dollars. Ten years ago, in 1948, it cost 23 billion dollars to administer our government. That is an increase of 17 billion dollars, nearly double the cost in ten years.

Early in the present administration, Herbert Hoover was called out of retirement and asked to head a committee to make a thorough study of the administration of our government and determine whether some savings could be effected. This committee was known as the Hoover Commission. The group made an exhaustive study at a cost of several million dollars to the taxpayers. The result

Mr. Lauck, an executive assistant of the Continental Oil Company, gave this address at the Arkansas Medical Society's Breakfast for the American Medical Association House of Delegates, Board of Trustees and Guests, in Miami Beach on June 13, 1960.

*Editor's Note: Thomas Jefferson, it is to be remembered, was a founder of what is now known as the Democratic Party. In his day it was called "Republican" or "Democratic-Republican."

of its findings, as made in its report and recommendations, showed that by eliminiating unnecessary bureaus and agencies, a colossal 7½ billion dollars could be saved annually.

This Hoover Commission Report was made nearly seven years ago. If the recommendations had been adopted, we could have reduced our national debt by some 50 billion dollars. Instead, we have increased our debt over 30 billion dollars during that same period of time. Last year more than 30 million people received checks from our government. One dollar out of every five dollars spent in the United States for both services and goods was spent by either federal, state, or local government agencies.

Someone recently said, "We have been living mighty high on the hog, but it 'ain't' our hog—it belongs to our children." Are we just going to drop this $295,000,000,000 debt in their laps and ask them to scramble out from under it the best way they can? Our children and future generations are entitled to inherit this republic as we found it—with freedom and opportunity, intact and unmortgaged.

WE HAVE BEEN ADEQUATELY WARNED

Down through the annals of history, for 7,000 years, nations have risen to great heights of prosperity and then have crumbled and fallen—not from marching legions but from internal decay, complacency and too much government. Because of their prosperity, the people grew a little fat. And when they got fat, they got lazy. When they got lazy, they said "Let the government do it." And their government got bigger and bigger, and the people got smaller and smaller, and finally the people were almost nothing at all. Read the history of China, of the great Roman Empire, of Greece or of France. Remember what happened in Germany only a few years ago. That country was a highly industrialized and prosperous nation operating under a constitutional government. And recall how suddenly she collapsed. Is there any reason to believe that it cannot happen to us? Let's not wait and try to read the handwriting on the wall after we have our backs to it.

Some economists say we are beyond the point of no return. This is hard to believe. We must realize, however, that this is THE ELEVENTH HOUR. We must realize the direction toward which we are drifting and do something about it *NOW*. We have got to concern ourselves with government matters—to get into politics. Too many for too long have been saying, "I don't know anything about politics; I leave that up to the politicians." The result is that a handful of people have been running this country. And our $295,000,000,000 debt, socialistic welfare programs, and the present threat against our free and competitive enterprise system indicate quite clearly HOW they have been running it.

ALL OF US MUST TAKE A HAND IN POLITICS

We must begin at the grass roots. Attend your local precinct meetings. Find out what candidates for office stand for—not whether they are Democrats or Republicans, but what kind of Democrats, what kind of Republicans. We have too many Democratic Congressmen and too many Republican Congressmen in Washington and not enough United States Congressmen.

It is not too late to put the love of our country above partisanship interests by selecting conservative candidates for office and then supporting them with all our strength and influence. In this way, and only in this way, can we hope to preserve our Constitution and the American way of life. There are enough conservative members in both parties if they would but assert themselves and assume leadership.

We can and must select men for office who will think of the next generation rather than the next election—men who will dedicate themselves to the preservation of our Constitution and our individual freedom—freedom of every man to stand on his own feet and be himself and become, God willing, whatever thing his vision, his manhood, and his faith can combine to make him.

When considering the problem of founding a new government, the American patriots who had been in the forefront of the Revolutionary War to separate the colonies from Great Britain, warned against creating a central government which, under the pretense of helping the people, might use the substance of the people to enslave them. It would be interesting to know what our forefathers must think of us and the way we have dissipated our inheritance—those pioneers who came to these shores only a few generations ago and carved this civilization out of a wilderness. They came here seeking freedom and opportunity. They did not ask for old-age pensions, workmen's compensation, social security, unemployment insurance, minimum hours, maximum wages. Come to think about it, they didn't ask for ANYTHING!

They realized that their future and the future of their families were their own responsibility and not that of their government. And with nothing more than a crooked stick for a plow, they rolled up their sleeves and, looking toward Heaven, said, "Thank you God; I'll take it from here."

These were our forefathers from whom we descended, the freedom-loving folks who founded this great nation of ours. Now we must prove that we are of that same sturdy stock by assuming the responsibility of preserving the heritage they willed us. THIS IS THE ELEVENTH HOUR!

PHYSICIANS HAVE A SPECIAL RESPONSIBILITY

The doctors who go to make up the American Medical Association are dedicated men, highly regarded in their respective communities. Their counsel and advice is quite often sought. Thus the

doctors of America have a great opportunity to persuade its citizens to think and realize the direction toward which we are drifting and to stop this trend which can only lead to our destruction. We are facing a crisis. It is the only real threat to our economic security we have ever experienced. The members of the American Medical Association as individuals must stand up and be counted and exercise the influence which their position in their communities places upon them, and the American Medical Association must stand as a body to defend our free enterprise system and to ward off the threat of socialized medicine.

There are two things with which we need to be concerned. We need roots to hold us firm and we need sky to hold us up, and in between, a living process. Because, out of our beliefs we perform deeds, and out of our deeds we form habits, and from our habits grow our character, and ON OUR CHARACTER WE BUILD OUR DESTINY!

Coming Meetings

In State

Sept. 18-20	**Iowa Chapter, American Academy of General Practice.** Savery Hotel, Des Moines

Out of State

Aug. 3-5	**Anesthesia for Special Procedures.** University of California at Los Angeles
Aug. 3-5	**St. Joseph's Hospital Annual Clinics.** St. Joseph's Hospital, Denver
Aug. 4-7	**Northwest Regional Meeting of the Academies of General Practice.** Seattle
Aug. 4-20	**Third Postgraduate Refresher Course (University of California School of Medicine).** Honolulu, aboard the *S.S. Lurline*
Aug. 7-10	**American Society of Clinical Hypnosis.** Miami
Aug. 7-12	**International Congress of Gerontology.** Mark Hopkins Hotel, San Francisco
Aug. 8-11	**National Medical Association, Inc.** Penn-Sheraton Hotel, Pittsburgh
Aug. 8-19	**Reconstructive Surgery of the Nasal Septum and External Pyramid (Department of Otorhinology of Mayer de Rothschild Hadassah University Hospital and the Hebrew University-Hadassah Medical School of Jerusalem).** Jerusalem
Aug. 8-20	**Medical Genetics.** Bar Harbor, Maine
Aug. 10-12	**Internal Medical Audit.** University of Colorado Medical Center, Denver
Aug. 11-13	**Rocky Mountain Radiological Society.** Denver-Hilton Hotel, Denver
Aug. 13-14	**Medicolegal Aspects of Injuries of Head, Face and Neck.** Muehlebach Hotel, Kansas City, Missouri
Aug. 14-19	**International Congress of Clinical Chemistry.** Edinburgh, Scotland
Aug. 14-20	**Inter-American Congress of Cardiology.** Rio de Janiero, Brazil
Aug. 15	**Cardiopulmonary Disease Seminar.** University of Colorado Medical Center, Denver
Aug. 15-18	**American Veterinary Medical Association.** Denver-Hilton Hotel, Denver
Aug. 15-19	**Western Cardiac Conference.** University of Colorado Medical Center, Denver
Aug. 15-26	**Third International Prosthetics Course (Committee on Prostheses, Braces and Technical Aids of the ISWC).** New York University Postgraduate Medical School, New York
Aug. 17-18	**Arthritis and Rheumatism.** University of California at Los Angeles
Aug. 18-20	**Reno Surgical Society.** Mapes Hotel, Reno
Aug. 20	**Second International Conference, American Institute of Ultrasonics.** Statler-Hilton Hotel, Washington, D. C.
Aug. 21-24	**Latin-American Congress of Angiology.** Rio de Janiero, Brazil
Aug. 21-26	**American Association of Blood Banks.** Jack Tar Hotel, San Francisco
Aug. 21-26	**Third International Congress of Physical Medicine.** Mayflower Hotel, Washington, D. C.
Aug. 22-26	**American Physiological Society.** Stanford University, San Francisco
Aug. 23-26	**Biological Photographic Association, Inc.** Utah Motor Lodge, Salt Lake City
Aug. 24-27	**International Congress of Internal Medicine (Sixth).** Basel, Switzerland
Aug. 25-27	**Conference on the Chemical Organization of Cells: Normal and Abnormal.** University of Wisconsin, Madison
Aug. 25-27	**West Virginia State Medical Association.** The Greenbrier, White Sulphur Springs, West Virginia
Aug. 26-27	**Obstetrical Procedures, Complications and Advances.** University of California at Los Angeles
Aug. 27-Sept. 1	**American Hospital Association.** Civic Auditorium, San Francisco
Aug. 28	**Fetal Electrocardiography.** University of California at Los Angeles
Aug. 28-Sept. 1	**International Congress for Individual Psychology.** Vienna, Austria
Aug. 28-Sept. 1	**Sixth International Congress on Diseases of the Chest (Council on International Affairs, American College of Chest Physicians).** Vienna, Austria
Aug. 29-Sept. 2	**World Congress of the International Society for the Welfare of Cripples.** New York
Aug. 29-Sept. 3	**European Conference on Electron Microscopy.** Delft, Netherlands
Aug. 31-Sept. 6	**Pediatrics (University of Colorado Medical Center).** Estes Park, Colorado
Sept. 1-3	**Clinical and Research Advances in Pediatrics.** University of Colorado Medical Center, Denver
Sept. 1-3	**International Congress of Nephrology.** Geneva and Evian, France
Sept. 1-4	**Pacific Dermatologic Association, Inc.** Empress Hotel, Victoria, British Columbia bia
Sept. 1-6	**Pediatrics (University of Colorado Medical Center).** Estes Park, Colorado
Sept. 1-7	**Internal Congress of Nutrition.** Shoreham Hotel, Washington, D. C.
Sept. 3-10	**Inter-American Congress of Radiology.** Sao Paulo, Brazil

Sept. 4-10	**International Society of Hematology.** Tokyo, Japan
Sept. 4-10	**World Congress of Anesthesiologists.** Toronto, Canada
Sept. 5-6	**Child Guidance Problems.** University of Colorado Medical Center, Estes Park
Sept. 5-7	**Conference on Biological Rhythms.** Siena, Italy
Sept. 5-9	**American Association of Blood Banks.** Fairmont Hotel, San Francisco
Sept. 6-9	**Flying Physicians Association, Third Clinical Meeting.** Western Hills Lodge, Wagoner, Oklahoma
Sept. 7-9	**Congress of International Society for Cell Biology.** Paris, France
Sept. 7-9	**International Congress of Criminology.** The Hague, Netherlands
Sept. 7-9	**Oregon State Medical Society Annual Convention.** Portland
Sept. 7-10	**Medical Women's International Association.** Baden-Baden, Germany
Sept. 7-10	**Nevada State Medical Association Annual Meeting.** Stardust Hotel, Las Vegas
Sept. 7-10	**Wyoming State Medical Society.** Jackson Lake Lodge, Moran
Sept. 8-10	**Postgraduate Assembly of St. John's Hospital.** St. John's Hospital, Santa Monica
Sept. 9-10	**Respiratory Allergy.** Cook County Graduate School of Medicine, Chicago
Sept. 10-12	**American Association of Obstetricians and Gynecologists.** The Homestead, Hot Springs, Va.
Sept. 10-12	**American Institute of Hypnosis.** Atlantic City
Sept. 11-15	**International College of Surgeons Twelfth International Congress.** New York City
Sept. 12-13	**International Conference on Trichinellosis, Polish Parasitological Society.** Warsaw, Poland
Sept. 12-14	**A Course in Industrial Medicine.** University of California, San Francisco
Sept. 12-15	**International Society of Blood Transfusion.** Nihon Toshi Center, Hirakawacho, Chiyoda-Ku, Tokyo
Sept. 13-15	**National Cancer Conference (American Cancer Society, Inc., and the National Cancer Institute).** Minneapolis
Sept. 13-15	**New England Tuberculosis Conference.** Plymouth, Massachusetts
Sept. 14-15	**Tri-State Medical Assembly.** Captain Shreve Hotel, Shreveport
Sept. 14-16	**Postgraduate Conference, Retinal Detachment.** Stanford University School of Medicine, San Francisco
Sept. 14-16	**Southern Trudeau Society and Southern Tuberculosis Conference.** Hotel Francis Marion, Charleston
Sept. 14-17	**Colorado State Medical Society.** Stanley Hotel, Estes Park
Sept. 15-17	**Montana Medical Association.** Baxter Hotel, Bozeman
Sept. 15-17	**Obstetrics and Gynecology.** University of California, San Francisco
Sept. 15-22	**General Assembly of the World Medical Association.** Berlin-Hilton Hotel, West Berlin, Germany
Sept. 16	**Medical and Chirurgical Faculty of the State of Maryland, semiannual meeting.** Ocean City
Sept. 17	**Santa Barbara County Heart Association Physician Symposium.** Biltmore Hotel, Santa Barbara
Sept. 18-19	**New England Society of Anesthesiologists.** Bretton Woods, New Hampshire
Sept. 18-21	**Second International Meeting of Forensic Pathology.** New York City
Sept. 18-25	**Third European Congress of Cardiology.** Rome, Italy
Sept. 19-23	**Hematology and Radioisotopes (American College of Physicians).** Ohio State University College of Medicine, Columbus
Sept. 19-23	**Pediatric Surgery.** Cook County Graduate School of Medicine, Chicago
Sept. 19-23	**Surgery of Colon and Rectum.** Cook County School of Medicine, Chicago
Sept. 20-22	**Kentucky State Medical Association.** Louisville
Sept. 20-23	**Utah State Medical Association.** Hotel Utah Motor Lodge, Salt Lake City
Sept. 22-24	**Advances in Surgical Anatomy, Normal Anatomy and Histology of the Eye.** University of California, San Francisco
Sept. 22-26	**International Cancer Cytology Conference.** Madrid, Spain
Sept. 23-25	**California Society of Internal Medicine Annual Meeting.** Yosemite
Sept. 23-25	**Inter-Society Cytology Council.** Palmer House, Chicago
Sept. 23-27	**College of American Pathologists.** Palmer House, Chicago
Sept. 24-30	**Annual Otolaryngologic Assembly.** University of Illinois College of Medicine, Chicago
Sept. 24-Oct. 2	**American Society of Clinical Pathologists.** Palmer House, Chicago
Sept. 25-28	**Washington State Medical Association Annual Convention.** Olympic Hotel, Seattle
Sept. 25-29	**National Recreation Congress.** Shoreham Hotel, Washington, D. C.
Sept. 25-Oct. 1	**Michigan State Medical Society.** Detroit
Sept. 26-30	**Surgery of the Hand.** Cook County Graduate School of Medicine, Chicago
Sept. 26-30	**Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago
Sept. 26-Nov. 7	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Sept. 27-30	**American Roentgen Ray Society.** Ambassador Hotel, Atlantic City
Sept. 27-Oct. 5	**Pan-Pacific Surgical Association Eighth Intensive Surgical Congress.** Honolulu, Hawaii
Sept. 28-30	**Advanced Electrocardiography.** University of Nebraska College of Medicine, Omaha
Sept. 28-Oct. 1	**International Society of Audiology.** Bonn, Germany
Sept. 28-Oct. 2	**Internal Medicine.** University of California, San Francisco
Sept. 30-Oct. 1	**American Medical Writers' Association.** Hotel Morrison, Chicago

Scientific Articles

The Treatment of Severe Hypertension

ALBERT N. BREST, M.D., AND JOHN H. MOYER, M.D.

PHILADELPHIA, PENNSYLVANIA

PRIOR TO 1950, few patients with severe degrees of blood-pressure elevation could obtain significant and sustained blood-pressure reduction. Treatment consisted of rigid dietary restriction of salt, and the administration of drugs with minor antihypertensive effectiveness (including barbiturates and thiocyanates). Fortunately, during the past decade, a variety of potent antihypertensive agents have become available for general use. These include Rauwolfia compounds, hydralazine, ganglion-blocking agents and the thiazide derivatives. At present, there are few patients whose blood pressure cannot be successfully reduced. However, the proper selection of an effective drug regimen requires an intimate familiarity with the various hypotensive agents that are available.

The definition of patients with severe hypertension includes those hypertensives in whom the basal diastolic blood pressure is 120 mm. Hg. or more, in whom the optic fundi are grades 2, 3 or 4 by the Keith-Wagener classification, in whom the heart shows evidence of left ventricular hypertrophy, and in whom there is some evidence of impairment of renal function such as albuminuria or impaired phenolsulfonphthalein excretion. These patients can be further subdivided into two groups which include ambulatory subjects with severe blood-pressure elevation, and those patients in whom a hypertensive emergency exists. The latter category includes patients with cerebral hemorrhage, hypertensive encephalopathy, intractable angina pectoris, acute glomerulonephritis and toxemia of pregnancy.

Dr. Moyer made this presentation at the Biennial Midwest Cardiac Conference, in Iowa City, on November 20, 1959. Dr. Brest is Director of the Hypertension—Renal Unit and Dr. Moyer is Professor and Head, Department of Internal Medicine, at Hahnemann Medical College and Hospital.

TREATMENT OF THE AMBULATORY PATIENT WITH SEVERE DIASTOLIC HYPERTENSION

The majority of hypertensive subjects in whom the diastolic blood pressure is between 120 and 140 mm. Hg. require an initial drug regimen consisting of more than one antihypertensive agent (Table 1). The most effective combination has been a regimen consisting of a thiazide derivative and a Rauwolfia compound. In those patients in

TABLE 1

COMPREHENSIVE THERAPEUTIC REGIMEN FOR THE TREATMENT OF SEVERE HYPERTENSION

Severity of Hypertension	*Initial Therapy*	*Adjunctive Therapy When Not Adequately Responsive to Initial Therapy*
Diastolic blood pressure > 120 mm. Hg. but < 140 mm. Hg.	Hydrochlorothiazide* and Rauwolfia	Hydralazine or ganglion-blocking agent
Diastolic blood pressure > 140 mm. Hg.	Hydrochlorothiazide* and Rauwolfia	Ganglion-blocking agent** or guanethidine

* One may use chlorothiazide or flumethiazide with equally good results.

** Must be added without delay when indicated.

whom the desired blood-pressure reduction is not obtained, hydralazine may be added to the therapeutic regimen, and if the latter combination fails to reduce the blood pressure, hydralazine may be abandoned in favor of a ganglion-blocking compound. An additional potent antihypertensive drug which will soon become available for general use is guanethidine. It appears likely that this new drug, which possesses a hypotensive potency semilar to that of the ganglioplegic drugs but with a lesser incidence of side effects, will be a valuable therapeutic substitute for those patients in whom the ganglion-blocking compounds are poorly effective or in whom the side effects of the latter drugs are too severe.

Thiazide Derivatives. Chlorothiazide was the first member of the benzothiadiazine family to become available for clinical use. Subsequently, a number of newer analogues (including hydrochlorothiazide, flumethiazide and hydroflumethiazide) have been introduced, and these additional thiazide derivatives have demonstrated comparable antihypertensive effectiveness when equivalent (natriuretic and diuretic) dosages are used.[1] These various compounds are of particular value in the treatment of severe hypertension because of their ability to potentiate all of the other available antihypertensive drugs (Figure 1).

The recommended dosage of the thiazide derivatives is 500 mg. twice daily of chlorothiazide or flumethiazide, and 50 mg. twice daily of hydrochlorothiazide. Sodium restriction should be practiced, but should not be too rigid. Specifically, a daily salt intake of 3 to 4 Gm. is recommended. In addition, it has been our experience that prophylactic electrolyte supplements (including potassium) are rarely required if these dosages are not exceeded.

A number of side effects and untoward reactions have been encountered with the thiazide derivatives, but the overall incidence has been low. Nausea, weakness and fatigue (unrelated to electrolyte imbalance or hypotension) may occur, but it is rarely necessary to discontinue therapy because of these effects. Skin rashes (purpuric, maculopapular or petechial) have been encoun-

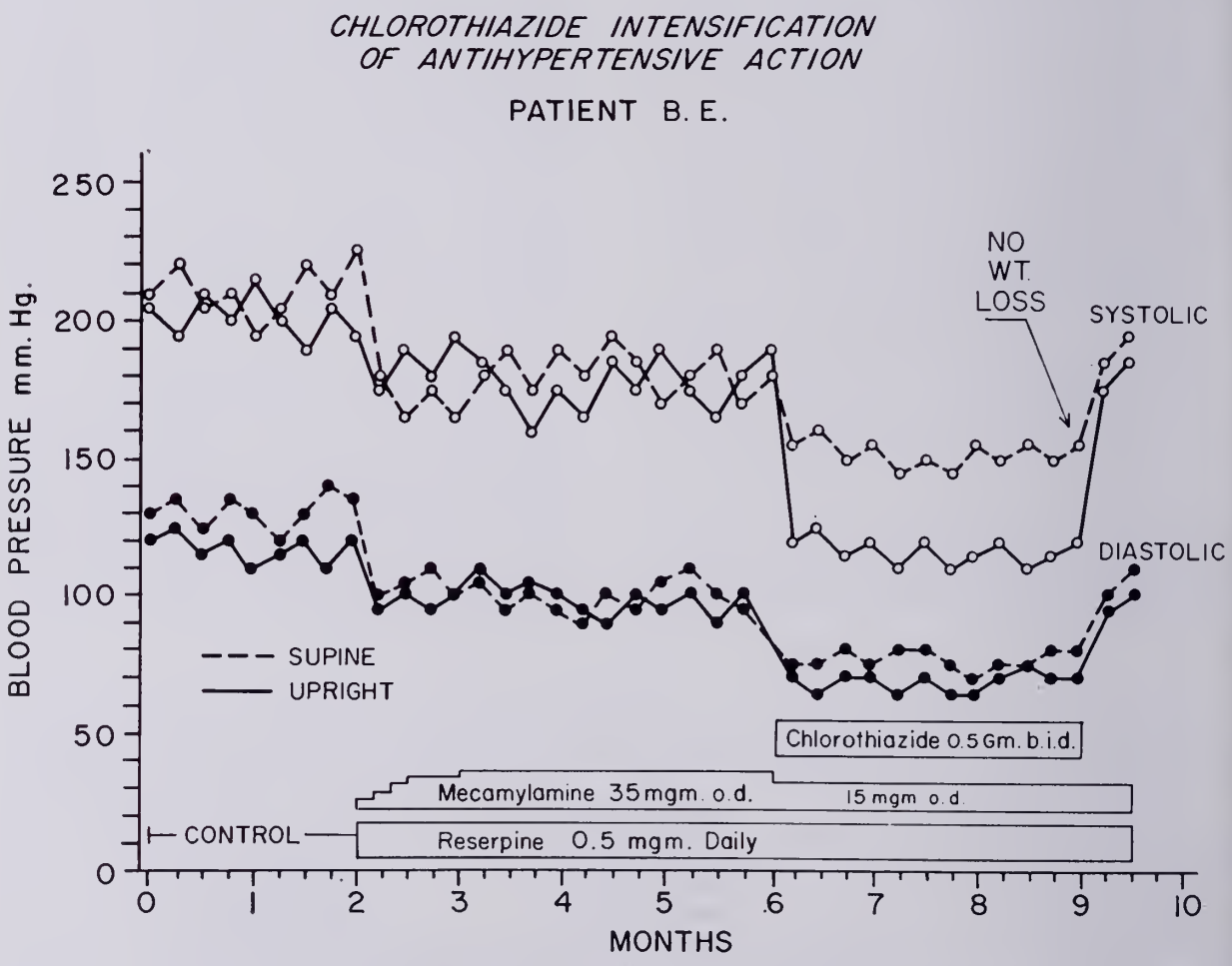


Figure 1. A significant potentiation of the antihypertensive effectiveness of mecamylamine and reserpine was accomplished by the therapeutic addition of chlorothiazide.

tered in a small percentage of patients. Elevation of serum uric acid may also occur, and the appearance of "gouty attacks" generally necessitates discontinuation of these drugs. In addition, elevation of blood urea nitrogen may occur in patients with renal failure, and the drug should be administered with great caution in patients with poor renal function.

Rauwolfia. Many Rauwolfia compounds are currently available, including the single pure alkaloids of Rauwolfia serpentina (reserpine, rescinnamine and deserpidine) and various preparations containing multiple active alkaloids (whole root and alseroxylon). Although there is statistically little difference in the hypotensive responses obtained with these various compounds, the incidence of untoward side effects is significantly less with the whole root (Raudixin) and alseroxylon fraction (Rauwiloid) than with the other preparations.[2] As with the thiazide derivatives, the Rauwolfia alkaloids are of particular value in the treatment of severe blood-pressure elevation because of their ability to potentiate the antihypertensive effectiveness of the other hypotensive drugs (Figure 2).

A minimum period of two to three weeks is required before maximum antihypertensive effectiveness is obtained when Rauwolfia is administered orally. Therefore, an initial loading dose of 8 mg. of alseroxylon, or 200 mg. of whole root, or 0.5 mg. of reserpine is administered during the first two weeks of therapy. Thereafter, the dosage can be reduced in half for maintenance therapy.

The various side effects encountered with the Rauwolfia compounds include nasal stuffiness, increased hunger, dizziness and excessive drowsiness. In addition, one must be particularly alert for the development of an agitated mental depression, the first symptom of which is likely to be insomnia during the early morning hours. The insomnia may be followed by a sense of impending disaster and even suicidal tendencies. The earlier manifestations of this depressive state, including the insomnia, will frequently improve with dextroamphetamine (Dexedrine). However, if the depressive symptoms progress, the drug must be discontinued.

Hydralazine. Hydralazine (Apresoline) is a potent antihypertensive agent, but should not be used as the sole antihypertensive drug in the treatment of hypertension because of its unwanted side effects. The major untoward effects encountered with hydralazine include headache, palpitations and increase in anginal symptoms. Hydralazine causes a sharp increase in cardiac output and may consequently produce coronary insufficiency in patients with coronary artery disease. Actual instances of myocardial infarction have been precipitated.[3] Therefore it is recommended that this drug be used only in combination with other antihypertensive agents. Rauwolfia is of particular value in this regard, since the latter drug tends to inhibit the cardioaccelatory effect of hydralazine.

The recommended initial dosage is 100 mg. daily (25 mg. after each meal and at bedtime). Thereafter, the dosage may be doubled at weekly intervals until an adequate reduction of the blood pressure has been accomplished, or until the in-

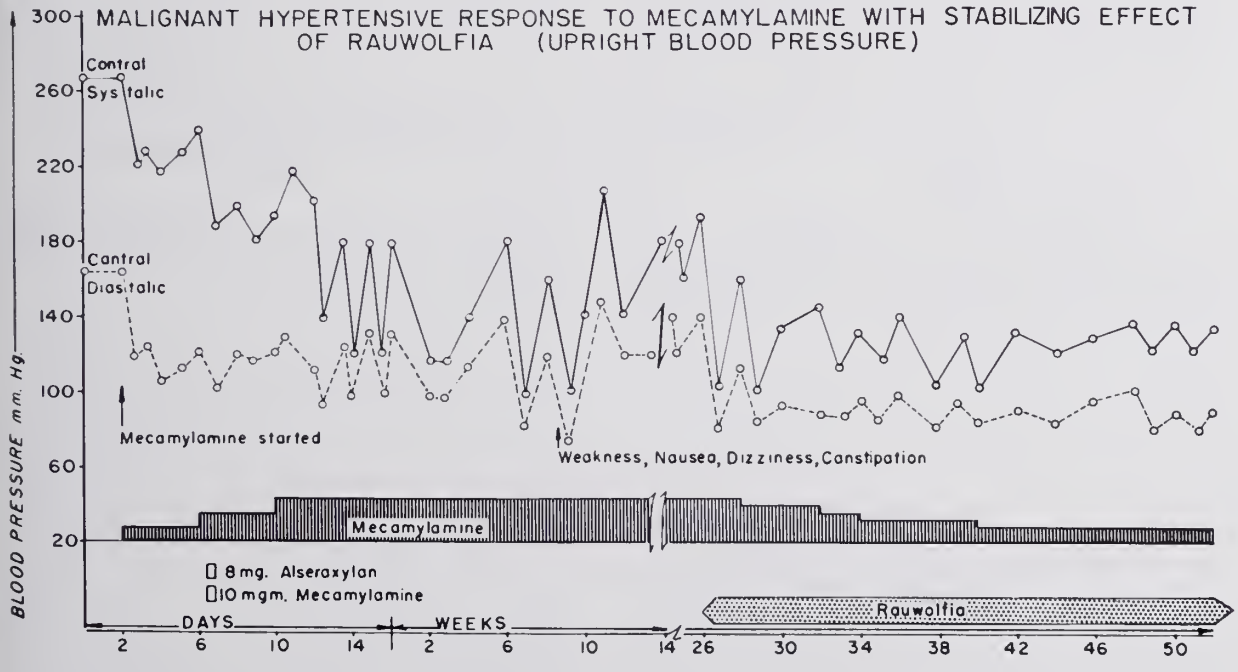


Figure 2. Rauwolfia potentiated and stabilized the hypotensive effect of mecamylamine in this patient.

cidence of side effects has become prohibitive. Total dosage of hydralazine generally should not exceed 400 mg. per day. The latter recommendation is made because the incidence of iatrogenic lupus erythematosus from this drug has generally occurred in patients receiving more than 400 mg. daily. However, iatrogenic lupus has been reported in patients receiving as little as 100 mg. per day.

Ganglion-Blocking Agents. Multiple ganglion-blocking compounds are available, including mecamylamine (Inversine), chlorisondamine (Ecolid), and pentolinium (Ansolysen). The approximate equivalent dosages of these drugs are 2.5 mg. mecamylamine, 12.5 mg. chlorisondamine, and 20 mg. pentolinium. Determination of optimum drug dosage is dependent upon effective drug titration. It is usually best to start with a small dose of ganglion-blocking agent, and then gradually increase the dose until the standing blood pressure has been reduced to the desired level.

Mecamylamine appears to be the ganglioplegic drug of choice, primarily because its absorption from the gastrointestinal tract is complete, and therefore the daily hypotensive response is more nearly uniform than that achieved with the other ganglion-blocking compounds. The usual starting dosage is 2.5 mg. twice daily. Thereafter, the dosage is gradually increased until the desired antihypertensive effect is achieved (Table 2). Blood pressure must be measured both in the supine and in the upright position, when one is regulating dosage, since the major hypotensive effect occurs with the patient upright. If the blood pressure is reduced to normotensive levels with the patient supine, he will experience orthostatic syncopal episodes. Similarly, in order to take full advantage of the orthostatic response, let the patient sleep in the semi-recumbent position with the head of the bed elevated on 10 to 12 in. blocks.

Side effects encountered with these agents are due to the simultaneous inhibition of neurogenic transmission within the parasympathetic ganglia. These untoward effects can generally be controlled quite readily. Constipation is the most common side effect, and it can be treated with milk of magnesia (30 cc.) or cascara sagrada (10 to 30 cc. elixir) or prostigmine (15 to 30 mg. before meals). Impaired visual accommodation and dry mouth improve with pilocarpine (5 mg. t.i.d.), and urinary retention can be controlled with urecholine (5 mg. t.i.d.).

TABLE 2

METHOD OF DOSE TITRATION OF GANGLION-BLOCKING DRUGS*

Week	*7 A.M.*	*12 Noon*	*5 P.M.*
1	1**	—	1
2	2	—	2
3	2	2	2
4	2	4	2
5	3	4	3
6	3	5	3
7	3	6	3
8	4	6	3

* Progression of dosage is stopped when reduction in blood pressure is achieved or side effects become troublesome.

** Expressed as units where 1 equals 20 mg. pentolinium, 12.5 mg. chlorisodamine or 2.5 mg. mecamylamine.

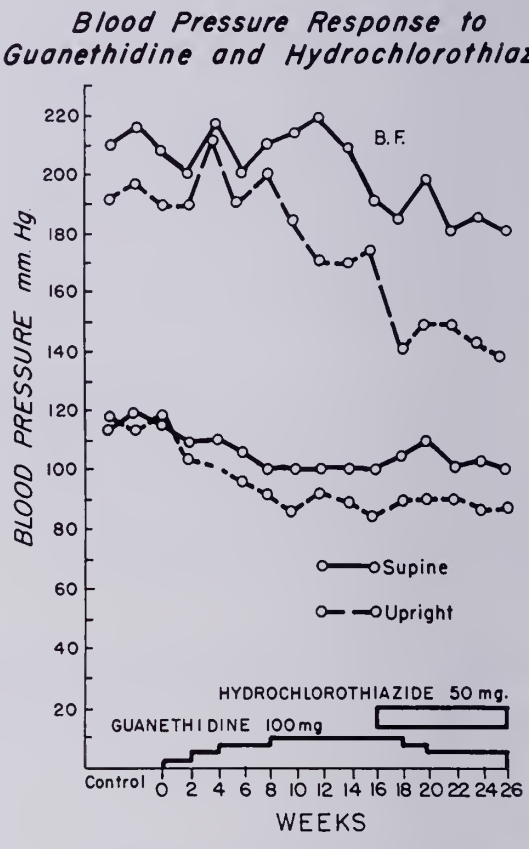


Figure 3. A significant postural hypotensive effect was accomplished by the therapeutic combination of guanethidine and hydrochlorothiazide.

Guanethidine. Guanethidine is a new antihypertensive drug with a hypotensive potency similar to that of the ganglion-blocking compounds.[4, 5] It will shortly be available for clinical use, and it is anticipated that its usefulness will be greatest in the patient with severe diastolic blood-pressure elevation. As with the ganglioplegic drugs, the hypotensive response obtained is predominantly a postural one. However, in contrast with the former group, the incidence of side effects is small. This new drug has purely sympatholytic action, which consists of an inhibition of the peripheral release of catecholamines from the postganglionic sympathetic fibers. In contrast with the ganglioplegic drugs, guanethidine does not inhibit the parasym-

pathetic ganglia, and therefore is devoid of the distressing parasympatholytic side effects seen with the former compounds.

Dosage of guanethidine required to obtain a significant response varies from 25 to 450 mg. per day, with an average dosage being 100-150 mg. daily. When administered orally, a hypotensive response will often fail to occur for two to three days. The initial recommended dosage is 25 mg. twice daily. Thereafter, this dose can be increased by 25 mg. increments at weekly intervals until the desired antihypertensive effect is obtained (Figure 3). Because the antihypertensive effect obtained is predominantly a postural one, it is also recommended that the patient sleep with the head of the bed raised on 10 or 12 in. blocks.

THE TREATMENT OF HYPERTENSIVE EMERGENCIES

Parenteral reserpine appears to be the drug of choice in most hypertensive emergencies (exclusive of the hypertension associated with pheochromocytoma).[6] However, the clinician must be prepared to use additional agents, depending on the type of hypertensive emergency and on the variability in individual patient response. Hydralazine is very dependable in the therapy of toxemia of pregnancy and acute glomerulonephritis. Ganglion-blocking agents are particularly useful in the patient with fulminating heart failure, and parenteral Veratrum extracts are effective in all types of hypertension (except pheochromocytoma). An outline for the antihypertensive treatment of hypertensive emergencies is provided in Table 3.

It is extremely important to appraise the state of renal compensation rapidly in these patients. This can best be done with an estimate of the blood urea nitrogen (BUN). When the BUN is normal, the blood pressure can usually be reduced to normotensive levels at once without untoward effect. In the patient with depressed renal function due to advanced kidney damage, the renal vessels do not dilate adequately when the blood pressure is reduced excessively, or too rapidly, and the existing renal insufficiency may be aggravated. When the BUN is elevated, this determination should be repeated every two to three days while the blood pressure is being regulated. When evidence of rising blood urea nitrogen is observed, the pressure should be allowed to increase slowly by decreasing the dose of the hypotensive agent until the BUN again decreases to pre-treatment levels.

After the hypertensive emergency is over, and the blood pressure and the general status of the patient have been stabilized for from three to seven days, oral antihypertensive treatment should be substituted for the parenteral medication. In the majority of these patients a therapeutic combination consisting of a thiazide derivative, a Rauwolfia compound, and a ganglion-blocking agent (or guanethidine) will be required. In the patient with toxemia of pregnancy, delivery of the fetus ultimately corrects the pathophysiologic state.

Reserpine. There are few hypertensive patients who do not achieve a significant blood-pressure reduction with parenteral reserpine. The importance of this compound in the treatment of hypertensive emergencies is enhanced by the fact that its antihypertensive effect is manifested in the recumbent as well as in the upright position. This attribute is of particular importance in the acutely ill, bedfast patient.

There is a latent period of one to two hours before blood-pressure reduction occurs, following

TABLE 3

OUTLINE FOR THE TREATMENT OF HYPERTENSIVE EMERGENCIES

Emergency	*Initial Therapy* DRUG	DOSE	ROUTE	FREQUENCY	*Adjunctive Therapy When Initial Drug Is Inadequate*
Encephalopathy	Reserpine or	2.5 to 10 mg.	I.M.	2-12 hours	Pentolinium. If inadequate response, then Veriloid by I.V. infusion
	rescinnamine	5 to 15 mg.	I.M.	2-12 hours	
Fulminating heart failure	Pentolinium	5 to 50 mg.	I.M.	30 minutes to 8 hours	Reserpine I.M. or Veriloid by I.V. infusion
Intractable angina with severe hypertension	Pentolinium	5 to 50 mg.	I.M.	30 minutes to 8 hours	Reserpine I.M. or Veriloid by I.V. infusion
Cerebral hemorrhage	Reserpine or	2.5 to 10 mg.	I.M.	2-12 hours	Pentolinium. If inadequate response, then Veriloid by I.V. infusion
	rescinnamine	5 to 15 mg.	I.M.	2-12 hours	
Toxemia of pregnancy	Reserpine or	5 to 10 mg.	I.M.	2-12 hours	Hydralazine 5-20 mg. I.V. or 10-25 mg. I.M.
	rescinnamine	7.5 to 15 mg.	I.M.	2-12 hours	

I.M.—Intramuscular
I.V.—Intravenous

either intravenous or intramuscular administration of parenteral reserpine. Therefore, if immediate reduction of blood pressure is desirable, a more rapidly acting drug must be given in addition to the Rauwolfia alkaloid.

The initial recommended dosage of parenteral reserpine is 2.5 mg. Thereafter, the dosage may be increased in 2.5 mg. increments until an adequate blood-pressure reduction is achieved. However, at least two hours must be allowed between doses in order that the maximum response to any single administration may be observed. If necessary, subsequent doses of 5 or even 10 mg. may be given, but individual doses should rarely exceed 10 mg., and the total dose should not exceed 20 mg. per day (Figure 4). After the proper dosage has been established, the patient can be placed on a regular schedule, which usually consists of 2.5 to 5 mg. of reserpine every 6 to 12 hours.

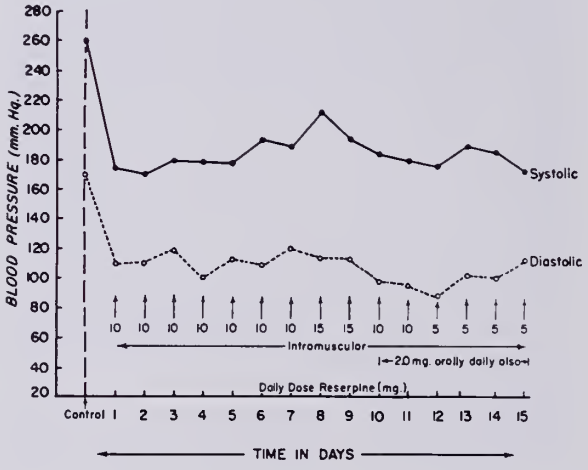


Figure 4. Adequate blood-pressure reduction was achieved by intramuscular reserpine, and the effect was maintained in this patient with severe congestive heart failure by the daily parenteral administration of the drug. Subsequently, the patient was maintained on oral Rauwolfia alone.

The side effects tend to become increasingly prominent as the dosage of reserpine or the frequency of administration is increased. Prolonged daily administration of more than 10 mg. depresses cerebration and may cause a Parkinson-like syndrome. Fortunately, the latter manifestations are temporary and tend to disappear several days after the discontinuation of the drug. However the soporific effect of large doses of reserpine may be a particular disadvantage in cases of cerebral hemorrhage or hypertensive encephalopathy when frequent evaluation of the level of consciousness is desirable. The therapist must also be alert for possible exacerbation of peptic ulcer disease, since reserpine causes an increase in gastric secretion.

Veratrum Drugs. Veratrum extracts are the most potent antihypertensive agents available, and are effective both in the supine and in the upright position. The clinical usefulness of these compounds is limited, however, by the narrow range which exists between toxic and therapeutic dosages of Veratrum. Nevertheless, because of its extreme potency and rapidity of action, parenteral Veratrum may be useful in the treatment of hypertensive emergencies when a rapid hypotensive response is required. Parenteral reserpine may be started at the same time, and when it has become effective, the Veratrum alkaloid may be discontinued.

Alkavervir (Veriloid) can be administered by continuous intravenous infusion, with the onset of action in several minutes. For intravenous administration, an initial priming dose of alkavervir (0.5 micrograms per kilogram of body weight per minute) is given during a 20-minute period. It is prepared by diluting 10 micrograms per kilogram of body weight of intravenous solution of alkavervir in 20 cc. of 5 per cent glucose in water. If the desired hypotensive response has not been achieved with the initial priming dose, the infusion may be repeated at least in part. Blood pressure should be measured every minute until an adequate blood-pressure reduction is obtained. Thereafter, 4 mg. of alkavervir in 1,000 cc. of 5 per cent glucose in water can be infused at a rate to maintain the desired blood-pressure level.

Hydralazine. The usefulness of parenteral hydralazine (Apresoline) is greatest in the management of the hypertensive emergencies associated with acute glomerulonephritis and toxemia of pregnancy. The onset of blood-pressure reduction occurs within 15 to 20 minutes. Therefore, it is given in cases with acute nephritis and toxemia where a rapid onset of action is necessary, or in patients who do not respond adequately to reserpine alone. The best results, however, are actually obtained when the two drugs are used in combination, hydralazine producing the more rapid action and reserpine allowing a more sustained effect.

When hydralazine is administered, an initial dose of 5 to 10 mg. should be given intravenously as a single injection over a 5-minute period, or intramuscularly in a dose of 10 to 25 mg. Then 25 mg. (depending on severity) should be placed in 1,000 cc. of 10 per cent glucose in water and administered by continuous intravenous infusion. The rate of infusion should be adjusted according to the blood-pressure response. The hypotensive effect obtained may last up to 12 hours.

Ganglion-Blocking Agents. The usefulness of the ganglion-blocking agents in the treatment of hypertensive emergencies is limited, for their major hypotensive effect it exerted with the patient in the upright position. Thus, the ganglioplegic drugs are used primarily when the response to reserpine is inadequate, or when an immediate effect on blood pressure is required. However, in addition,

these compounds are particularly indicated in those patients with severe congestive heart failure in whom blood-pressure elevation is sudden. As therapeutic blockade is established, venous tone is reduced, and the patient experiences a resultant decrease in venous pressure, a decrease in right-atrial pressure and an increase in cardiac output. The subsequent relief of pulmonary edema is often dramatic.

When one gives pentolinium by continuous intravenous infusion for hypertensive emergencies, 50 to 200 mg. is placed in 1,000 cc. of 5 per cent glucose in water. The drug is infused at a moderate rate until the blood pressure begins to fall. Then the rate of infusion is adjusted so as to maintain an adequate blood-pressure reduction. Norepinephrine is an effective antidote, if an excessive reduction in blood pressure occurs. For intramuscular use, an initial dose of 5 mg. is used, and subsequent doses can be progressively increased, at one- to two-hour intervals, until pressure reduction is adequate or a maximum dose of 50 mg. has been given. Response is rarely greater with larger doses.

Continuous parenteral administration of ganglion-blocking compounds frequently leads to the development of ileus and urinary retention. Retention catheters are often required for elderly men who receive these drugs for any significant interval. Cathartics should be used freely for relief of constipation, and cholinergic agents are sometimes even more effective. Prostigmine, 15 to 45 mg. before each meal, is usually adequate. In a comatose patient, 1 mg. of prostigmine is given intramuscularly. For relief of ileus, 1 mg. should be given every hour until the ileus is relieved.

SUMMARY

Effective drug therapy is now available for the hypertensive patient with severe diastolic blood-pressure elevation. A successful antihypertensive response can be obtained in most ambulatory patients with a drug regimen consisting of a thiazide derivative, a Rauwolfia compound and a ganglion-blocking agent. Guanethidine is a potent antihypertensive agent which promises to be useful in those patients in whom the former regimen fails to achieve the desired hypotensive effect. In the treatment of hypertensive emergencies, reserpine is the most useful antihypertensive agent available. In addition, therapy can be effectively supplemented with parenteral Veratrum, hydralazine or ganglion-blocking compounds.

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Teen-Age VD Rate Is Mounting in Iowa

During the last two years, a marked increase has occurred in the numbers of gonorrhea cases reported in Iowa, and about 50 per cent of all of them have been in persons under 21 years of age, Dr. R. H. Heeren, director of the Division of Preventable Diseases in the State Health Department, told the newspapers on June 28. During the first five months of 1960, he said, 592 cases were reported—36 more than in the like period of 1959.

Dr. Heeren and Mr. H. L. Boyd, administrative assistant to the state director of VD control, said that prostitution and the possibility that transients contribute to the Iowa disease rate are very small factors. Although there have been sporadic outbreaks in certain localities, no one area of the state is worse than any other. "This isn't a city problem. It happens everywhere. Perhaps Des Moines shows a large percentage of cases because of its heavier population and better reporting methods. But even the rural areas have their problems," Dr. Heeren declared.

"Anyone having VD or suspected of having it and behaving in a way that makes him or her likely to infect others can be quarantined," Dr. Heeren explained. "However, we've been steering clear of law enforcement because of the confidential nature of the work. Our records are kept extremely confidential, and we usually try to talk a person into getting treatment and divulging information to us."

"There used to be many more cases of infectious syphilis than of gonorrhea, but the pattern has been reversed in recent years," he continued. "In 1959, for example, there were 603 syphilis cases reported during the first five months. For the same period this year, the total was 552."

Obstetrical Anesthesia in Iowa

MADELENE M. DONNELLY, M.D., M.P.H.

DES MOINES

As we become more and more desirous of reducing maternal and perinatal morbidity and mortality, we must focus our attention more firmly upon obstetrical analgesia and anesthesia. Any improvements along this line must involve not only the physician responsibile for the obstetrical care of the mother, but many other people as well. One of these is the anesthetist who is responsible for the care of the mother and the infant throughout labor and delivery, and another is the hospital administrator who is responsible for the procurement of staff and equipment. In-service training must be maintained for the nursing staff so as to keep nurses aware of the technics involved in administering the newer anesthetics. Then, above all, there is a need for parent education, not only to combat the misinformation that frequently appears in the lay press, but also to gain acceptance for the fact that anesthesiologists perform a service for which a fee must be charged.

A review of the types of anesthetic agents and the classifications of anesthetists now being utilized for obstetrics in this state is a timely project, and thus all of the live births that occurred in Iowa hospitals in January, 1958, have been studied. This has involved many personal visits and interviews, but the staffs of the hospitals have been most cooperative, and information has been obtained on all of the 4,959 deliveries that occurred during that month. Besides the usual information obtained from birth and death certificates, the anesthetic agent and the type of anesthetist were noted for each birth.

CLASSIFICATIONS OF HOSPITALS AND ANESTHETISTS

The hospitals were grouped according to the numbers of live births that had occurred in them in 1957. To simplify the preparation of tables, the following classifications will be used:

Group A—Those hospitals with fewer than 100 live births per year

Group B—Those hospitals with 100-249 live births per year

Group C—Those hospitals with 250-499 live births per year

Group D—Those hospitals with 500-999 live births per year

Group E—Those hospitals with 1,000 and over live births per year.

Dr. Donnelly, the director of the Division of Maternal and Child Health, in the State Department of Health, made this presentation at the Refresher Course for General Practitioners held in Iowa City on February 17, 1960.

The distributions of live births among the various groups of hospitals was no different from the distributions in the preceding few years. The percentages of spontaneous and operative births and cesarean section rates were also unchanged from those obtained in past studies, and it is therefore felt that this sample month, involving about 8 per cent of a year's births, is representative of what is happening in this area.

The distribution by population followed the usual pattern for this state.

Next, an attempt was made to classify the individuals who administered the various anesthetic agents. The following groups were established:

1. "Physicians trained in anesthesia" are those doctors with training in anesthesiology who limit their practices to anesthesia. Members of this group administered 16.3 per cent of all anesthetics—13.0 per cent of the anesthetics for spontaneous deliveries, and 27.3 per cent of the anesthetics for operative cases.

2. "Registered nurse anesthetists" are nurses who have been certified in anesthesia. Members of this group administered 22.1 per cent of all obstetrical anesthetics—for 19.9 per cent of the spontaneous and 29.2 per cent of the operative deliveries.

3. "Physicians" are those doctors who deliver their patients under regional block anesthesia which they themselves administer, or who do some anesthesia but in the main are practitioners and not anesthesiologists. Physicians were responsible for 11.2 per cent of all anesthesias—9.9 per cent of the spontaneous and 15.6 per cent of the operative deliveries.

4. "Registered nurses" are the general nurses administering anesthesia who have had no training and have no certification in anesthesia. Such nurses were responsible for 42.5 per cent of all the deliveries—47.4 per cent of the spontaneous and 26.1 per cent of operative deliveries.

5. "Non-professional" refers to aides, practical nurses and like personnel. There were 61 anesthetics administered by such people. Although this is only 1.2 per cent of all deliveries, in the Group A hospitals non-professionals administered anesthetics at as high as 11.1 per cent of the births.

6. "Self-administered." There were 96 so-called self-administered anesthetics. These were all accomplished with Trilene, local block being added in 22 cases. Although these represent only 1.9 per cent of all deliveries, in Group A they accounted for 12 per cent of the cases. In the hospitals in

rural areas, 6.9 per cent of the patients had self-administered anesthesia. This percentage dropped as the population increased, and it was negligible in the more urban areas.

7. "No anesthesia." There were 236 patients who had no anesthesia for delivery. For the most part, these were women who had precipitate deliveries or who were admitted to the hospital too late for anesthesia. However, some of these women did receive medical analgesia, but no attempt was made to collect data on that matter. Though this group made up 4.8 per cent of the total, in Group A hospitals it accounted for 7.4 per cent, and in the Group B institutions 8.7 per cent. On the basis of population, 9.6 per cent of the patients who had no anesthesia were in communities of less than 2,500 population, and the shares declined progressively in the larger and larger centers, until they were only a little over 3 per cent in the two groups of communities of 50,000 population and over.

When an inhalant anesthetic agent was used in conjunction with a regional anesthetic, the regional was credited to the person who administered the inhalant. Thus, "combined anesthesias" were credited to the anesthetist or nurse administering the inhalant, and not to the physician who did the regional block.

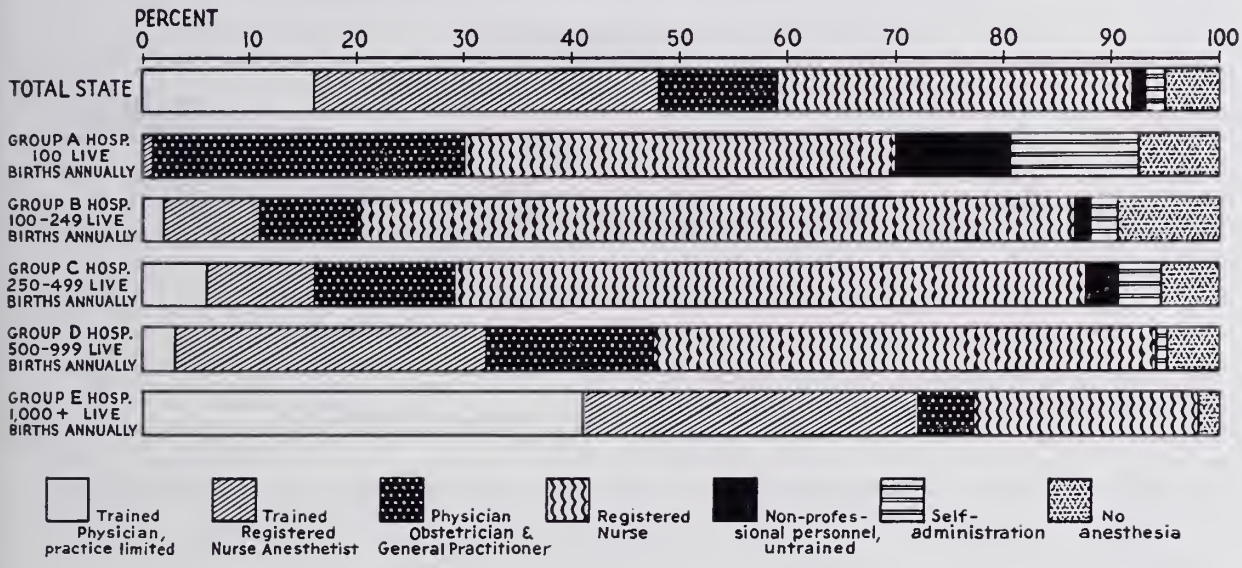


Figure 1

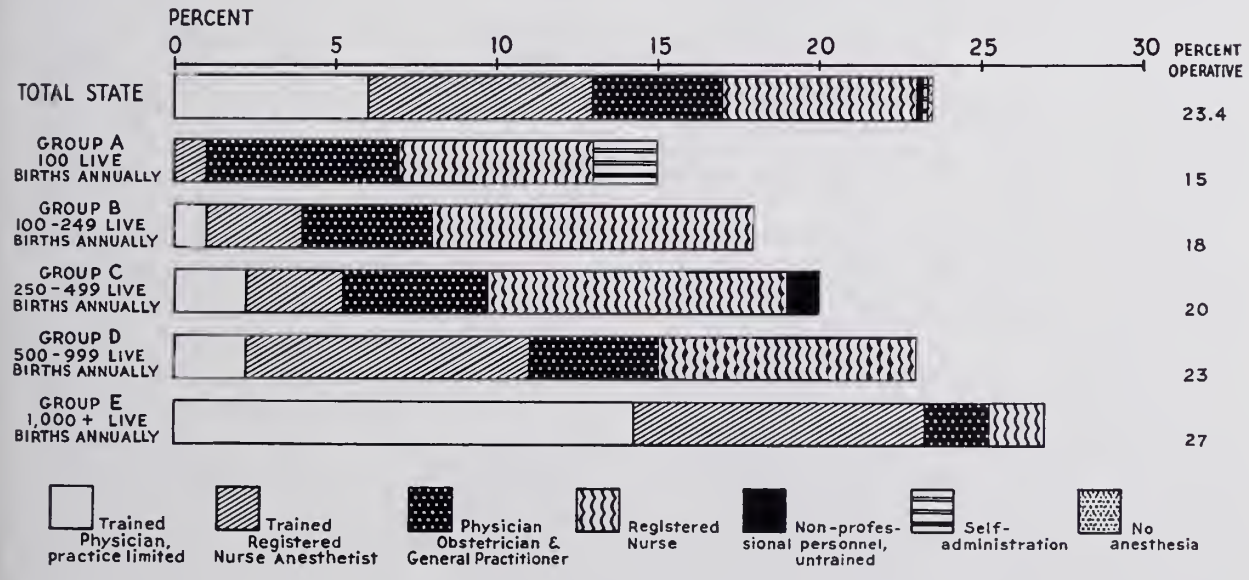


Figure 2

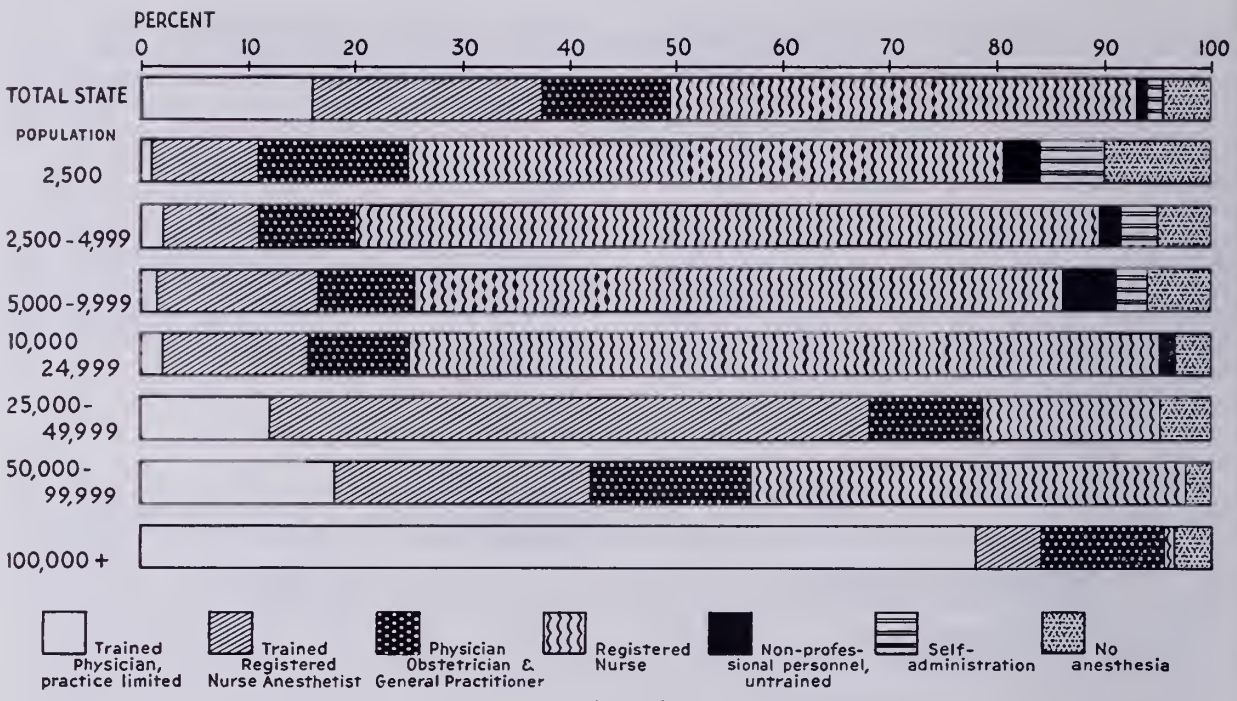


Figure 3

NOTEWORTHY FINDINGS

It is apparent that almost half of all obstetrical anesthesias are given by nurses not trained in anesthesia (Figure 1). The use of the nurse is greater in the smaller hospitals. However, in all groups of hospitals there is a tendency to use the more highly-trained anesthetists for operative deliveries (Figure 2).

When the hospitals are grouped by populations of communities (Figure 3), it can be seen that the nurse does most of the obstetrical anesthesias in the smaller communities, but as the population increases, the use of an untrained anesthetist decreases.

Conversely, the trained anesthetist gives only a few obstetrical anesthesias in the smaller hospitals or more rural areas. In many instances, the trained anesthetist is brought in with a surgeon for difficult or operative cases.

Several smaller hospitals are fortunate in having certified nurse anesthetists who do not care for full-time employment, but who live in their communities and are available for complicated or operative deliveries.

An attempt was made to classify the wide variety of anesthetic agents used. They are listed more or less separately in Table 1, and are grouped for convenience under five main headings: Inhalants, Inhalants Combined With Regional Block, Regional Blocks, Intravenous, and Psychological.

The frequency with which the medical anesthetist, nurse anesthetist and physician used certain anesthetic agents, in spontaneous and opera-

TABLE 1
TYPES OF ANESTHETIC AGENTS USED
January—1958

	No.	*Per Cent of Total*	*Order of Frequency*
GROUP I, INHALANTS			
Group	3,158	66.9	
Nitrous or cyclopropane	1,605	34.0	1
Trilene	866	18.4	2
Ether	453	9.6	5
Chloroform	94	2.0	8
Vinethene	39	0.8	10
Combination of above	101	12.9	4
GROUP II, INHALANT WITH REGIONAL			
Group	826	19.5	
With local or pudendal	809	17.1	3
With spinal or saddle	13	0.3	12
With caudal or epidural	4	0.1	14
GROUP III, REGIONAL			
Group	671	14.2	
Local or pudendal	241	5.1	7
Spinal or saddle	400	8.5	6
Caudal or epidural	30	0.6	11
GROUP IV, INTRAVENOUS			
Group	66	1.4	
Pentothal alone	16	0.3	13
Pentothal with inhalant	47	1.0	9
Pentothal with regional	3	0.1	15
GROUP V, HYPNOSIS			
Group	2	0.05	16

tive cases, is shown in Table 2. The untrained nurse was limited to inhalant anesthesia, with or without regional block. Likewise, the "self-administered" agents were either ether or Trilene. Each type of anesthetist appears to have his own armamentarium.

There were 89 neonatal deaths in this series—a rate of 17.9 deaths per 1,000 live births. This is a little higher than prevailed the year before, but the series is a little small for the drawing of a definite conclusion. The fact that often the anesthetic is chosen because the mother or the fetus may already be in trouble makes it very difficult to draw conclusions as to neonatal death rates for the various agents.

Many obstetricians have expressed an interest in the types of anesthesia used for cesarean section. In this series there were 170 sections. Of these, 32.3 per cent received inhalant alone; 22.9 per cent had inhalant combined with regional block; 35.9 per cent had regional block (usually spinal); 7.1 per cent had intravenous pentothal; and 1.8 per cent had pentothal with a regional block. Two of the anesthetics for section were given by a nurse, and the remaining 168 were evenly divided among physician anesthetists, nurse anesthetists and physicians.

HAZARDS IN THE USE OF TRILENE

It is not the purpose of this paper to criticize obstetrical anesthesia in Iowa, but it seems evident that many inhalant anesthetics are being given by people insufficiently trained in the physiology of the obstetrical patient or in the pharmacology of the drugs used.

It is evident that Trilene has had a rapid upsurge in use. Discussion with the profession brings out the fact that doctors think the successful use of Trilene in England warrants a free use of the drug without a review of the precautions the English use with it. E. H. Seward and R. Bryce-Smith, in their booklet INHALATION ANALGESIA IN CHILDBIRTH,[1] refer to the extensive training that midwives have to undergo before they are permitted to use Trilene. They also point out its dangers if used in higher than the recommended concentration (0.4 to 0.5 per cent), and therefore require that a midwife use Trilene only by means of an approved inhalator.

They, as well as others, point out that trichlorethylene is quickly broken down into phosgene and hydrochloric acid in the presence of heat or alkali. Therefore, it can never be used in the conventional type of anesthesia machine when the anesthetic gases pass through soda lime. Trilene is ex-

TABLE 2

ANESTHETIC AGENTS USED, BY TYPE OF ANESTHETIST

January—1958

Anesthetic Agent	*Trained Physician* NO.	PER CENT	*Registered Nurse Anesthetist* NO.	PER CENT	*Physician* NO.	PER CENT	*Registered Nurse* NO.	PER CENT	*All Other* NO.	PER CENT
Inhalants										
Nitrous or cyclopropane	429	52.9	798	72.9	69	12.4	311	14.7	0	0.0
Trilene	17	2.1	22	2.0	38	6.8	685	32.5	104	66.2
Ether	6	0.7	21	2.0	6	1.1	403	19.1	17	10.8
Chloroform	0	0.0	0	0.0	10	1.8	84	3.9	0	0.0
Vinethene	3	0.4	0	0.0	1	0.2	35	1.7	0	0.0
Combination of above	3	0.4	44	4.0	3	0.5	50	2.4	1	0.7
Inhalation with regional										
With local or pudendal	68	8.4	163	14.9	10	1.8	533	25.3	35	22.3
With spinal or saddle	0	0.0	6	0.5	0	0.0	7	0.3	0	0.0
With caudal or epidural	0	0.0	2	0.2	1	0.2	1	0.1	0	0.0
Regional										
With local or pudendal	4	0.5	0	0.0	237	42.7	0	0.0	0	0.0
With spinal or saddle	261	32.3	2	0.2	137	24.7	0	0.0	0	0.0
With caudal or pudendal	8	1.0	0	0.0	22	4.0	0	0.0	0	0.0
Intravenous	9	1.1	36	3.3	21	3.8	0	0.0	0	0.0
Hypnosis	2	0.2	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	808	100.0	1,094	100.0	555	100.0	2,109	100.0	157	100.0

creted slowly from the body, and after a patient has had Trilene for analgesia, another anesthetic agent must be chosen if deeper anesthesia is to be used. The patient may continue to excrete the Trilene for a considerable period, and it would be dangerous to subject her to the chance of Trilene decomposition if she is switched to a closed-system anesthesia. In England, if it becomes necessary for a midwife to send her patient to a hospital because of a complication, it is required that she place a tag on the patient which will alert the hospital staff to the fact that the patient has had Trilene.

In this series, 19 patients received either nitrous oxide or cyclopropane *following Trilene.*

A great deal of the Trilene here is given on an open mask, and hence concentration cannot be controlled.

When Trilene is used in a high concentration in an attempt to produce anesthesia, it is believed that the drug acts on the vagus nerve and produces an increase in the respiratory rate which, in turn, can produce a tachypnea capable of initiating a cardiac complication. The muscular relaxation obtained with Trilene is so uncertain that attempts to deepen anesthesia may be disastrous.

OTHER MAJOR DANGERS

Many people seem to have gained the impression that self-administered analgesia is an answer to the personnel shortage. This is a fallacy, for it has been pointed out that a patient needs very close supervision when she has been given a self-administering inhaler, as well as constant support and encouragement from a well trained, competent attendant. Interviews with maternity staffs emphasized the fact that a patient in labor readily learns how to prop an inhaler so that it does not fall away from her face as she loses consciousness.

Another point stressed by several authors is the danger inherent in using a parasympathetic stimulant such as pituitrin, pitressin or epinephrine along with anesthetic agents which in themselves stimulate the parasympathetics. Cyclopropane, chloroform and Trilene are such agents. When one of the pituitrin preparations is given in conjunction with one of these other agents, the two may have a synergistic effect on each other and cause a bronchiospasm or laryngospasm which may initiate cardiac irregularities. Greenhill, in his handbook on anesthesia,[2] discusses the pituitary-cyclopropane incompatibility quite completely.

Hingson and Hellman[4] not only warn about the incompatibilities but also about the danger of using ergot preparations on patients who have had vasopressor drugs, particularly if there is any possibility that the patient is hypertensive. A major incompatibility may develop when ergonovine or ergotrate is given a patient who has had a spinal anesthetic with ephedrine or some vasopressor drug.

A third point that is important in analgesias or anesthesias is the warning that many obstetrical patients come to the labor or delivery room with a full or partially-filled stomach. With the increased pressure of a gravid uterus, a relatively small amount of food in the stomach may prove dangerous. One should not try to evaluate the gastric contents from the time of the last meal, but rather from the relation between the time of the last meal and the onset of labor. It is known that labor will cause a remarkable slowing of digestive processes.

Many nurses working in delivery rooms feel that a few whiffs of some anesthetic agent cannot possibly harm the patient. It must be pointed out, however, that very light anesthesias are the ones that are likely to induce vomiting. With the frequent chances a maternity patient has of coming to delivery with a full stomach, the anesthetist certainly needs to understand the use of airways and other technics to keep a patient comfortable and safe.

CONCLUSIONS

This material has been prepared and presented because of the interest of many of the profession in the various ramifications of this problem. To the author, it would seem that anyone reading it will feel that a few conclusions must be drawn.

We must face the fact that the greater part of obstetrical anesthesias are being given by personnel who have not had training in anesthesia. It will probably be years before medical anesthesiologists are numerous enough to staff smaller hospitals. In the meantime, there are three educational approaches to pursue in the interests of improving our obstetrics. The first is to interest the generalist in learning more about using regional blocks. The second is to provide the obstetrical nurse with some concentrated training in anesthesia. The last suggestion is one that is being used successfully in one or two small communities in the state. There, two physicians each take a concentrated postgraduate course in anesthesia—from four to six weeks. This by no means qualifies them as anesthesiologists, but does give them some firm background work. With this preparation, they agree to sit in on each other's deliveries. Thus, the patient is provided a better qualified anesthestist, and in addition an extra pair of trained hands is kept available in the usually inadequately-staffed delivery room of a small hospital.

DISCUSSION BY DR. W. C. KEETTEL

Dr. Donnelly is to be commended for this excellent study of obstetrical anesthesia in Iowa. Even though the survey was conducted for just one month, 4,959 deliveries constitute an adequate sample and give valid information concerning cur-

Dr. Keettel is head of obstetrics and gynecology at the S.U.I. College of Medicine.

rent trends in anesthesia. It is apparent to those studying maternal deaths that anesthetic complications have become increasingly important. With the reduction of deaths from other causes, there has been a proportional increase in fatal anesthetic complications related to cardiac arrest, aspiration and respiratory difficulties.

Under the most nearly ideal conditions, obstetrical anesthesia is most difficult to administer for the following reasons: (1) two individuals must be considered; (2) the depth, type and duration of the anesthesia is dependent upon the method of delivery; (3) uterine contractility should not be inhibited; and (4) the patient is not well prepared, and often has recently eaten, or is fatigued and depressed by analgesic drugs.

In the average hospital, the anesthesia problems are further complicated by (1) poor delivery-room facilities; (2) inferior anesthetic equipment and safety devices; (3) lack of trained anesthesia personnel; and (4) lack of concern on the part of the hospital administrators and the medical staff concerning this problem. It is under such handicaps that a great many general anesthetics are given to obstetrical patients. Many of these problems cannot be corrected easily; others can be lessened.

What is the most commonly used anesthetic agent in Iowa, and by whom is it given? One-half of all the obstetrical patients receive inhalation anesthesia given by nurses who have had no special training in anesthesia. Many feel that since the patient is carried rather lightly, there are few dangers from this method. This attitude is unjustified, since vomiting and aspiration are more common under such circumstances. Furthermore, can the inexperienced nurse deal successfully with such emergencies? Local anesthetics in combination with inhalation agents constituted the anesthesia in 22 per cent of the cases, and pudendal block was used alone in five per cent. It would seem that until more experienced anesthetists are available it would be far safer for the physician to deliver the majority of the uncomplicated patients under some form of regional block.

As physicians, we are often resistive to changes. At the University Hospitals, we have many fixed concepts that may be open to question. However, our attitude toward obstetrical anesthesia has been subjected to many changes. From 1926 to 1940, inhalative anesthesia consisting of ethylene and occasionally chloroform or ether was used. Caudal anesthesia was the procedure of choice from 1940 to 1945, and saddle block from 1946 to 1952. From 1952 to the present time, there has been a gradual increase in the use of pudendal block, and at the present time 65 per cent of our patients receive this form of anesthesia for delivery. This is not by necessity but by choice, since we have excellently trained M.D. anesthesiologists available for each delivery. If this can be accomplished in our institution, it could easily be done in the other hospitals in Iowa.

What are the advantages of transvaginal pudendal block? (1) It can be done by the physician a few minutes prior to the delivery, and is effective in 65 to 75 per cent of cases. (2) It is the safest form of anesthetic agent. (3) The mother is awake and can watch the delivery. (4) The uterus contracts well, reducing the danger of postpartum hemorrhage. (5) Fetal anoxia is appreciably lowered. (6) It is an inexpensive procedure (nowadays an unusual feature for a first-choice technic). And finally (7) it is available to any physician, and requires no special training.

As with any technic, there are certain disadvantages. (1) There are failures, but the block can be repeated or a local infiltration of the episiotomy site may be done. (2) Delivery is not entirely painless, for the patient is conscious of bearing down, of uterine contractions and of some perineal distention. (3) The expulsion of the placenta may be uncomfortable. It would seem, however, that the advantages far outweigh the disadvantages. Would it not be wise for more physicians to deliver their patients under pudendal block that they themselves administer, than to rely upon inhalation anesthesia given by untrained personnel?

Dr. Donnelly's presentation and these comments should not be taken as criticism of obstetrical practice in Iowa. We are all proud of the fine record achieved by Iowa physicians in the prevention of maternal deaths. However, it would seem that more attention should be paid to the problems of obstetrical anesthesia. The wider use of transvaginal pudendal block and the availability of training courses for personnel who are interested in obstetrical anesthesia would be of material help in improving obstetrical anesthesia and reducing maternal complications.

DISCUSSION BY DR. JACK MOYERS

Convincing evidence has been presented that anesthesia for obtsetrical patients is a sadly neglected part of medical practice in Iowa. As is usually true, a problem of this importance is the fault of many persons. In some instances trained anesthesiologists are culpable because they consider obstetrical anesthesia inconvenient and unrewarding. Deliveries do interfere with scheduled surgical procedures, and the financial attractions are often minimal. In addition, obstetrical anesthesia is most uninteresting to many anesthetists. However, these and other reasons for neglect of delivery-room activity by those trained in anesthesia do little to solve the problem. The patient in labor needs and deserves a talented anesthetist just as much as does the patient with gallbladder disease or vari-

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cose veins. In fact, when one considers the obligatory effect on the fetus of the depressant drugs that are administered to the mother, perhaps it is even more imperative that the mother obtain the best available anesthesia.

The anesthesiologist has a challenging opportunity to render services to his hospital and his community in a variety of ways. He can often make himself available for administration of anesthesia to obstetrical patients. Unfortunately he cannot always do so, but he can interest himself—and therefore others—in equipment, technics and procedures used in the delivery room so that helpful criticism can be offered to nurses and obstetricians. The very nature of the practice of anesthesiology should make the anesthetist a constant source of consultation with regard to problems in sedation, analgesia and resuscitation. Only by appropriately projecting his efforts, interest and abilities into the field of obstetrical anesthesia can the physician anesthetist deserve to be called a specialist in anesthesia.

On occasion, the obstetrician can be blamed for what appears to be a sad state. Contrary to many opinions, *it is just not true* that "anybody can give an anesthetic." The peculiar problems presented by pregnant women in labor make this idea particularly fallacious in the field of obstetrics. Lack of appropriate pre-medication, full stomachs, hemorrhage and obstetrical complications, to name a few difficulties, tax even the best of anesthetists and often necessitate skill and judgment rarely called for in daily routine surgical anesthesia. The added burden of having simultaneously to serve both mother and baby safely makes additional demands. Yet, countless patients are sentenced to inferior anesthesia because the obstetrician either does not realize the danger or is unwilling to lessen it by arranging for better anesthesia on the obstetrical service. This must be done as a routine. To obtain the best anesthetist for cesarean sections and complicated cases is not enough. A normal pregnancy and anticipation of a normal delivery at the hands of a competent obstetrician do not constitute an immunization against aspiration of vomitus, overdose of anesthesia or respiratory obstruction. Patients in first-rate physical condition must not be penalized by being given second-rate anesthesia simply because in most cases they will tolerate it without mortality or observable complication. It is the duty of obstetricians to obtain the best anesthetist available for *every* patient, whether or not trouble is anticipated.

Obviously, there remains a host of obstetrical patients for whom a trained anesthetist is not available in the community. The answer to this problem seems more difficult. However, I refuse to believe that the obstetrician in the small city or small hospital, whether he be a specialist or a general practitioner, need resign himself to his present lot, which is apparent from the facts presented above. This physician, particularly, has through the years demonstrated a flexibility and resourcefulness not practiced by his colleagues in larger centers. This same sense of propriety can be applied to anesthesia for obstetrical patients. Information is available from books, journals and those who consult and teach in this field. The things that are needed are an interest and a desire to improve. Ivory-towered anesthesiologists have no corner on the intelligence market when it comes to the common-sense use of morphine, scopolamine, ether or Trilene. If their use of these agents is more successful, it merely reflects a relative increase in their interest in this particular field, and in their willingness to be open-minded and self-critical. Certainly, these attributes are not to be denied any medical practitioner. The physician who is now doing a good job of playing the role of internist, surgeon, psychiatrist, urologist, obstetrician and pediatrician on a daily or hourly basis can make the transition to anesthesiologist for the benefit of a colleague's patient, and can do so with little turmoil if his desire to learn is strong enough. The fact that in our smaller hospitals one out of four obstetrical anesthesias is administered by an aide, a practical nurse, a scrubwoman or the patient herself should stimulate this desire somewhat.

The number of physicians in Iowa who combine general practice and anesthesiology is now increasing, but still more of them must do so. There are too many communities without adequate anesthesia services that can never attract full-time specialists. It appears that the solution to this problem rests with the part-time anesthetist. The generalist with skill in anesthesia is a very valuable man to his community, his professional colleagues and his own patients. Many Iowa general practitioners have found this a very rewarding experience.

Obstetrical anesthesia in this state is in dire need of improvement. That this is a depressing picture is probably the fault of a big percentage of the physicians in Iowa, and an even larger number can participate in solving the problem. It is the rare physician in this state who can say that this is a job for the other man.

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"Iowa Trumpet," Pudendal Needle Guide*

DAN S. EGBERT, M.D., FORT DODGE, W. C. KEETTEL, M.D., IOWA CITY,

AND JAMES G. LEE, M.D., KANSAS CITY, KANSAS

IT IS RECOGNIZED that obstetrical inhalation anesthesia is difficult to administer for the following reasons: (1) Two individuals must be considered. (2) The depth, type and duration of anesthesia are dependent upon the method of delivery. (3) Uterine contractility may be inhibited. (4) The patient is often not well prepared. Since many hospitals do not have trained personnel available for obstetrical inhalation anesthesia, an increasing number of physicians are selecting transvaginal pudendal block for delivery because this procedure is safe, readily available and economical.

Local perineal infiltration and pudendal blocks have been used for many years. However, recent advances have increased our knowledge of this procedure and thus have increased our efficiency in its use. Klink[1] provided an anatomical description of the pudendal nerve, and a demonstration that small amounts of anesthetic solution injected below the ischial spines would give satisfactory perineal anesthesia. Kobak *et al.*,[2] using the transvaginal approach, was able to obtain satisfactory perineal anesthesia for as long as one hour, using a small volume.

Lee[3] made a significant contribution by devising a stainless steel needle guide which controlled placement of the needle below the ischial spines and avoided puncturing the glove with the needle. The guide technic has increased the efficiency of the transvaginal regional block.

Egbert liked Lee's method, but felt that certain modifications would render the guide more efficient. The following three changes were made: (1) A ball point prevents tearing the vaginal mucosa and facilitates placing the needle below the ischial spine. (2) A funnel on the proximal end of the tube makes introduction of the needle into the small-caliber tube easier. (3) A ring for the operator's thumb provides steady control of the guide while the other hand is free to manipulate the syringe and needle. Figure 1 shows the above features of the guide, a twenty gauge, 6 in. needle and a 10 cc. Luer-Lock syringe with han-

* Available from the Iowa Medical Supply Company, Fort Dodge, Iowa.

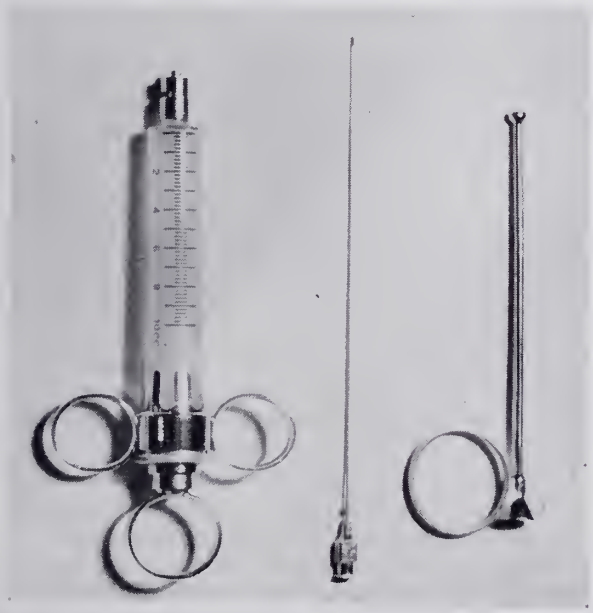


Figure 1. "Iowa Trumpet" Guide, with 6 in., 20 gauge spinal needle and 10 cc. syringe with handles.



Figure 2. Positioning of the "Trumpet" Guide, right ischial spine. Ten milliliters of one per cent xylocaine is injected.



Figure 3. Shows the same procedure being repeated on the left side.

dles. Figures 2 and 3 demonstrate the positioning of the guide in relation to the ischial spines. Ten milliliters of one per cent xylocaine is injected into each side.

The above modification has proved most useful and is suggested as a means of improving the efficiency of transvaginal pudendal blocks.

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AMERICAN HEART ASSOCIATION'S ANNUAL SCIENTIFIC SESSIONS

The American Heart Association's 33rd Annual Scientific Sessions, to be held at Kiel Auditorium, in St. Louis, from Friday, October 21, through Sunday, October 23, will include six conferences of broad clinical interest running concurrently with the investigative scientific programs. Also included are programs of particular interest to dentists and nurses.

The six clinical programs, stressing the application of findings in cardiovascular research, will be proportioned among symposia, panels, lectures of general interest and papers on recent results of research. As in the past, these sessions have been classified by the American Academy of General Practice as acceptable for Category II credit for its members.

The opening scientific session on Friday, October 21, will include introductory remarks by A. Carlton Ernstene, M.D., president of the Association; the Lewis A. Conner Memorial Lecture on "Physiology of the Circulation as Viewed by the Internist," by Eugene A. Stead, Jr., M.D., professor and chairman of medicine at the Duke University School of Medicine. The remainder of the session will be conducted jointly by the AHA Council of Clinical Cardiology and the American College of Cardiology. "Fireside Conferences," sponsored jointly with the American College of Cardiology, are scheduled for Friday evening.

Saturday's program is to include presentation of the Association's Albert Lasker Award and the George E. Brown Memorial Lecture on "Clinical Physiology of the Splanchnic Circulation," by Stanley E. Bradley, M.D., chairman of the Department of Medicine at the Columbia University College of Physicians and Surgeons.

Included in Sunday's sessions are three symposia on the subjects of "Complete Heart Block," "Nondietary Factors in Coronary Artery Disease," and "Lipids and Arteriosclerosis." Following a similar program presented successfully last year, Sunday's sessions will also include morning and afternoon showings of cardiovascular films, each of which will be introduced by the author or another authority on the subject.

This year, for the first time, a session for dentists has been scheduled—for Friday afternoon. Also, following the enthusiastic acceptance of a like session in 1959, a program for nurses has been set for Saturday morning and afternoon.

As in previous years, scientific and industrial exhibits will be on display in the Auditorium.

Registration forms and housing application blanks may now be obtained from the American Heart Association, 44 East 23rd Street, New York City 10.

Lessons to Be Learned From

A Glaucoma Survey

MANSOUR F. ARMALY, M.D.

IOWA CITY

In recent years we have witnessed a revival of hope for the detection of glaucoma before it has produced any destruction of visual function. The clinical application of newly developed technics for exploring the aspects of ocular physiology related to the glaucomas has prompted this renewed optimism.

Interest in glaucoma is by no means limited to ophthalmologists. As the second ranking cause of blindness in the United States today, it has attracted the attention of various social organizations as well as responsible government agencies. Thus, it isn't surprising that a large number of "glaucoma surveys" or mass screening projects have been enthusiastically undertaken in various parts of the country.

It is important for the medical profession, the participating organizations and the subjects themselves to ask what these surveys screen, to determine how they can be improved and to decide how much they contribute to the fight against glaucoma and its resultant blindness.

Generally, in medical surveys, a surveyor is expected to make certain statements about the presence or absence of disease in each participating subject. Such statements influence the attitude of the participant toward the disease, either reducing his vigilance or increasing his anxiety. Thus, the surveyor should have a valid empirical evaluation of what it is that his tests test, so that he can translate the results into a recommendation that will evoke the proper attitude in the subject.

At this stage of the discussion, it is important that we note the differences between the responsibilities of the ophthalmologist and of the glaucoma surveyor. When an ophthalmologist examines a patient and finds glaucoma he is called upon to treat him according to the best available medical knowledge. The glaucoma surveyor, on the other hand, approaches individuals with supposedly normal eyes, with the understanding that he can detect the presence of the disease or inform them of the chances of its development in the future. The two men thus need different types of knowledge and different evaluative technics.

This study, sponsored jointly by the Iowa State Department of Health and the S.U.I. Department of Ophthalmology, was undertaken in an effort to evaluate the leading clinical "glaucoma tests," and also to gain some impressions regarding the relative efficacies of the tests used in mass screenings. After a start had been made, the study was transformed into a five-year project to measure the predictive value of the various "glaucoma tests," with the hope of establishing the reliability of the surveyor's prognoses.

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TESTS

The following tests were investigated:

1. Visual acuity for distance using Snellen's chart and the patient's correction when corrective lenses were used
2. Central visual fields using the standard tangent screen and the Harrington-Flocks multiple-pattern screen
3. Biomicroscopic examination of the anterior segment to determine whether the anterior chamber is "deep" or "shallow"
4. Ophthalmoscopic examination of the disc and surrounding retina
5. Tonometry, using Mueller's electronic tonometer, to obtain an estimate of the intraocular pressure according to the 1955 calibration tables of Friedenwald.
6. Tonography to obtain an estimate of the facility with which the intraocular fluid leaves the eye through the outflow channels
7. The water-drinking test and tonography at 60 minutes (This test monitors the change in intraocular pressure every 15 minutes for one hour following the ingestion of 1,000 cc. of water after an eight-hour fast.)
8. The darkroom test with tonography (The change in pressure after one hour in complete darkness is investigated, and tonography is performed at the end of the hour.)

The first six tests were performed routinely on all subjects. The last two were performed on a randomly selected control group. In addition, those with "shallow" chambers had the darkroom test with tonography, and those with a visual-field abnormality or a pressure reading of 22 mm. Hg. or higher had the water-drinking test with tonography.

THE SAMPLE

The sample was recruited through the Des Moines Council of Social Agencies, with the help of various social and professional organizations.

The number of individuals in each age group and the ratio of men to women were determined by James F. Speers, M.D., M.P.H., director of the Des Moines-Polk County Health Department, in accordance with the latest census figures. An attempt was made to secure appropriate representations from various occupations. The group consisted of individuals over 40 years of age who had no histories of ocular disease or surgery and who, to the best of their knowledge, had normal vision and no sign or symptom that would prompt them to seek the advice of an ophthalmologist. In the 1958 study, 319 subjects were recruited from among the individuals who fulfilled the criteria for the study. In 1959, the study was repeated on 220 subjects from the original sample, and on 195 new subjects. Whenever possible, I shall attempt to supplement our knowledge of the 1958 sample by adding information obtained from the 1959 study. The survey was completed on April 16, 1959.

TEST RESULTS

The Visual Acuity Test. Last year, 30 per cent of the sample failed to attain a visual acuity better than 6/12 in at least one eye. All such individuals were advised to seek the help of an ophthalmologist for determining and treating the cause of this reduced acuity. This year, only 10 per cent of the 220 individuals failed to attain an acuity of better than 6/12.

Central Visual Field Test. We attempted to compare the efficiencies of the multiple pattern screen and the standard tangent screen in glaucoma detection under the conditions of a mass survey. The former is simpler and quicker; the latter is more refined and exacting, yet completely dependent on the ability of the subject to understand and cooperate, as well as on the quality and degree of his motivation and on the technic of the surveyor. Because of these factors, a real field defect may not be detected by this test, and mimicry of a field defect is possible.

In the performance of the standard tangent screen test, during the first year, the 1/1200 white target was routinely and exclusively used in order that the earliest field changes of glaucoma might be detected. In the analysis of findings obtained through each of these tests on the same subject, it became apparent that the difference between the stimuli used in particular cases and the discontinuity in the sampling of the visual field by the first test made it impossible to secure a quantitative or objective comparison of the records.

In attempting a comparison of corresponding points or segments of the two records, we encountered another important limitation. An undesirably large number of tangent screen records showed a "contracted" visual field that did not include the blind spot. The "contracted" fields obtained by the tangent screens presented an undesirable feature. Such fields may be encountered in glaucoma, but their presence in persons of the age group being tested and under the conditions of the study is by no means a definite indication of the disease. The importance of this test to the entire problem of glaucoma called for a revision of the technic, and the following changes were made and proved successful in the 1959 study:

1. The emphasis was shifted from the target size to the extent of the visual field in any one subject. For routine use, the 1/1200 white target was replaced by the *smallest* white target that included the blind spot in each subject. The absence of the blind spot from any visual field record renders it useless from the standpoint of detecting glaucoma.

2. The standard tangent screen was replaced by the Gunkel self-recording tangent screen, with magnetic targets. The elimination of the wand and the marking pins with this method, together with the remote position of the performer, simplified this test and improved the reliability of the final record.

As a result of these changes, the visual field records obtained in 1959 were far more meaningful. If one keeps in mind the critical importance of the visual-field test in the detection of glaucoma, the successful performance of this test under the conditions of the study assumes great significance.

Tonometry. The various tests utilizing tonometry yield in a standard manner a numerical *estimate* of what they propose to measure. Having obtained these values on the entire sample, one then asks himself what they can tell him about the subject and about the presence or the future development of glaucoma.

Here are some of the things that we shall want to be able to say about each subject on the basis of his test values:

1. That he has, or does not have, glaucoma at the time of the test
2. That the chances of his having glaucoma at the time of the test are great, or are small
3. That he will inevitably, or will never, develop glaucoma
4. That his chances of developing glaucoma in the future are great, or are small.

In order to decide whether such information is available, we need to clarify what we mean by the term *glaucoma*, and which is the type of glaucoma that a survey or mass screening project can detect.

WHAT IS GLAUCOMA?

The term *glaucoma* covers a variety of clinical disease entities characterized, in general, by destruction of the visual function and associated with high intraocular pressure.

The adult glaucomas are divided into primary and secondary. Glaucoma is secondary if it is the result of another ocular disease. The primary glaucomas can be subdivided into closed-angle and open-angle glaucomas, depending upon whether

the chamber angle is seen to be closed or open at the time of the increased pressure. Additional characteristic features such as acute onset, the presence of congestion, redness and pain, and the rapid development of noticeable visual symptoms separate the closed-angle cases from those of the open-angle variety. The latter type has a characteristic slow onset which is not associated with ocular symptoms, so that by the time the slowly progressing visual loss can first be detected by the patient, the disease has already reached an advanced stage.

From these considerations, it is obvious that the variety of glaucoma with which a survey is most concerned is the open-angle, for it is less likely to have become apparent to the subject, and because it produces progressive and irreversible destruction of visual function.

Criteria for Chronic Open-Angle Glaucoma. The criteria by which chronic open-angle glaucoma can be distinguished from the other categories of the disease have been established only for the advanced stage, where a nerve-fiber bundle defect of the visual field, atrophy and excavation of the optic nerve, and a "high" intraocular pressure become demonstrable. Although there is agreement on the criteria for the advanced stage, the chronology of their development, or their interrelationships at the start have by no means been established. The criteria for the early stage of this disease vary with the individual ophthalmologist.

The basic difficulty in recognizing the early stage of chronic open-angle glaucoma is in establishing the relationship between the intraocular pressure and the damage to the visual field, and in being able to demonstrate this empirically in any individual subject.

From clinical experience, we know that high pressures may exist for a long time without producing visual damage, and that nerve-fiber bundle defects and optic atrophy can produce marked visual damage without becoming associated with a "high" pressure. This difficulty has been responsible for subdividing the open-angle category into low-tension and high-tension glaucoma, depending upon whether the pressure is recorded as high or low. Either is capable of producing blindness, with atrophy and excavation of the optic nerve head. The poor correlation between intraocular pressure and the incidence of glaucoma was formerly blamed upon the uncertainty with which the Schiotz tonometer provides an estimate of pressure, but it continues to exist following the introduction of Goldman's aplanation tonometer, which is little influenced by the rigidity of the eyeball.

The discrepancy has led to the use of the term "normative" pressure, instead of "normal in frequency" or "frequent," and to the use of the term "pathologic," instead of "infrequent." By this terminology we recognize that the level of the intraocular pressure capable of producing visual-field damage varies with the individual.

Though this terminology helps us reconcile the inconsistency in our theoretical speculation about the development of glaucoma on the basis of intraocular pressure, it has not been helpful in actual practice. So far, no tests have been developed by which we can tell at any one time or visit whether a certain pressure level in an individual subject is "normative" or "pathologic."

PREDICTION ON THE BASIS OF TEST VALUES

Since all these tests provide numerical values, it is important to inquire into the manner in which these values become indicative of the presence or of the future development of glaucoma.

Clinically, we speak of these test values as "high" or "low," "normal" or "abnormal." Then, these terms are employed as indices of the likelihood of glaucoma, and in actual practice "glaucoma" is substituted for "abnormal."

How have the limits for these criteria been established?

1. An investigation was made of cases in which the pressure level had been regarded as the critical factor. Certain individuals, despite the presence of field loss and optic-nerve changes, had been excluded from the "glaucoma" group because their pressures were below a certain limit. Similarly, certain individuals had been excluded from the "normal" group because their pressures were above a certain limit, even though they had normal visual function. The pressure limit in each case had been *arbitrarily* selected.

Though such studies may speak of the predictive significance of pressure readings in the samples studied and in identical samples of "normals" and "glaucomas," they don't speak of a real population group of "normal" subjects or of individuals afflicted with a visual dysfunction of the glaucoma type. Furthermore, these studies don't inform us about the future development of glaucoma. In other words, such studies don't lead to or justify the conclusion that individuals whose visual function is normal now, but whose pressure readings equal those of individuals in the "glaucoma" sample, will inevitably develop the visual dysfunction of glaucoma, or that their chances of doing so are any greater than those of individuals whose pressures are lower.

For the prediction of future visual events on the basis of values obtained by means by the tonometer, it must be shown that when each and every individual in a class meets well-defined criteria for normal visual function, and when all members are subjected to the various tonometer tests and followed for a definite period of time, those who develop abnormalities demonstrable by the same visual-function tests are the ones who could have been separated from the rest with a certain degree of success by means of the tonometer at the time when their visual-function test

results were normal. To date, such information is entirely lacking, and the prediction of future visual events on the basis of the tonometer test values remains an "opinion," and not an empirically-established relationship.

2. Pressure readings were taken in a sample of "normals," and then the average and the standard deviation were calculated, on the assumption that the sample represented the normal statistical distribution. Pressure levels were then determined for various frequencies—10, 5 and 1 per cent, etc. The *assumption* was then made that test values infrequent in the normal group and in the direction that the test values assume in established glaucoma were indicative of the future development of glaucoma, and that the intensity of this indication was directly related to the infrequency of such test values in the "normal" group. This assumption has never been tested or verified empirically.

Furthermore, the examination of the distribution of pressures in "normal" individuals was conducted upon *a priori* grounds. That is to say, we were certain at the start of the investigation that certain pressure levels were abnormal. In consequence, some individuals with normal visual function were excluded solely on the basis of pressure or test values whose frequency distribution was being investigated. The resulting distribution, freed from extreme values, will automatically have a better fit with the normal statistical distribution. In such studies, "infrequent" becomes synonomous with "abnormal," and "abnormal" is interpreted as meaning "indicative of present or future glaucoma."

Evidently, such an investigation cannot facilitate correct predictions of the frequency of test values in a population group containing individuals with normal visual function, and also cannot permit correct predictions of future "normality" or "abnormality" of visual function.

In summary, the available information enables a surveyor to inform his subjects of the presence of the advanced stage of glaucoma, if his survey includes tests of visual field, optic nerve and pressure. Once this triad is demonstrable in any participant, the diagnosis of glaucoma can be made.

If only pressure estimates are available, a surveyor can expect to separate or screen his sample into two groups on the basis of pressure readings or test values. In the group with high pressures, he can expect advanced glaucoma, as defined, to be singularly more prevalent than in the group with low pressures, though he cannot state how many or which individuals in the former group have glaucoma. The same holds true for the remaining tests that utilize tonometry.

On the other hand, a surveyor cannot speak of the "low pressure" group as being free from the advanced stage of glaucoma, for the marked diurnal variation in pressure may not allow a single test to coincide with the high phase of pressure, thus causing the surveyor to miss some of the advanced glaucomas.

It is important to remember that in the group with low pressures, we cannot conclude that nerve-fiber bundle defect and/or optic atrophy are absent, or even that they aren't pronounced, since this group was excluded from the sample of "glaucomas" when the pressure distribution was investigated.

Needless to say, the surveyor has no information on which to justify his predicting whether or not an individual will develop glaucoma, irrespective of stage or definition, in either one of these two groups.

THE POTENTIAL VALUES OF SUCH A SURVEY

It is of paramount importance for us to realize what such a survey can accomplish. Such a realization will trim the expectations of the surveyors to the limits of achievement that are dictated by our empirically validated knowledge of this disease. Thus, it will help prevent the development of unwarranted and undesirable health attitudes in the surveyed. In addition, those of our expectations that lack the necessary empirical foundation will be clarified and brought to the forefront, so that our efforts can be concentrated upon verifying them.

The foregoing discussion is additionally significant in that it shows the position of the surveyor to be similar to that of the general practitioner. In its generalists, the medical profession has a full-time regiment who see individuals in whom diseases of special organs have not developed to a degree that warrants their seeking the advice of specialists. Thus, general practitioners should be called upon to help in gathering the information necessary for the adequate control of blindness due to glaucoma.

CLINICAL RESULTS

Since this study offered a unique opportunity for evaluating our clinical performance, in that the tests were performed in the same group rather than evaluated separately in independent samples, an analysis of the distribution of test values in

TABLE 1

Test	*Average*	*Standard Deviation*
Tonometry in mm. Hg.	17.08	3.06
Facility of outflow in cu. mm./mm. Hg./min.	0.24	0.065
Water drinking test in mm. Hg.	A rise of 1.28	2.45
Dark room test in mm. Hg.	A rise of 2.14	2.16

TABLE 2

TEST VALUES OCCURRING IN VARYING PERCENTAGES OF EYES IN THE NORMAL SAMPLE

	In 10% or Less	*In 5% or Less*	*In 2% or Less*
Tonometry in mm. Hg.	22 or more	23 or more	24 or more
Facility of outflow in cu. mm./mm. Hg./min.	0.14 or less	0.13 or less	0.09 or less
Water drinking test in mm. Hg.	A rise of 5 or more	A rise of 6 or more	A rise of 7 or more
Darkroom test in mm. Hg.	A rise of 5 or more	A rise of 6 or more	A rise of 7 or more

TABLE 3

THE NUMBER OF INDIVIDUALS ATTAINING A TEST VALUE WHICH OCCURS IN 10 PER CENT OR LESS OF EYES IN THE NORMAL SAMPLE

(Total Number of Individuals in the Sample—514)

Test	*Number of Individuals*
Tonometry	128
Facility of outflow	165
Water drinking test	103
P_o/C = or <100 after water drinking test	205
P_o/C = or <100 after water drinking test and/or initial tonography	257

P_o/C ratio is the ratio of pressure to facility of outflow. This ratio was reported to be of help in separating glaucoma from normal when equal to or greater than 100.

that part of the sample having visual acuity of 20/20 or better and normal visual fields was desirable.

The average and standard deviation calculated for each test appear in Table 1. It is apparent that the results are not significantly different from those reported by other workers in independent samples. Thus, it becomes possible to calculate the test values expected to occur with a certain frequency (Table 2).

An evaluation of our clinical performance involves finding out how many *individuals* we would screen from the sample by means of the various levels of suspicion for these various tests. It is important to keep in mind that in calculating values we considered *each eye* independently, whereas in screening we separated individuals, irrespective of whether one or both eyes possessed the limiting test value. Thus it was to be expected that there would be an "error" in predicting frequency of individuals on the basis of the frequency of eyes attaining a certain limit.

Table 3 shows the number of individuals who would have been screened if the 10 per cent limit had been used for each test and if that test had been the only one performed on the sample.

Table 4 shows the number of individuals who attained the 10 per cent limit in one or more tests when all tests were performed on the entire sample. The significant fact here is that individuals attaining the 10 per cent limit on one test might not attain the same limit in all tests. Individuals attaining this limit in more than one test were counted only once.

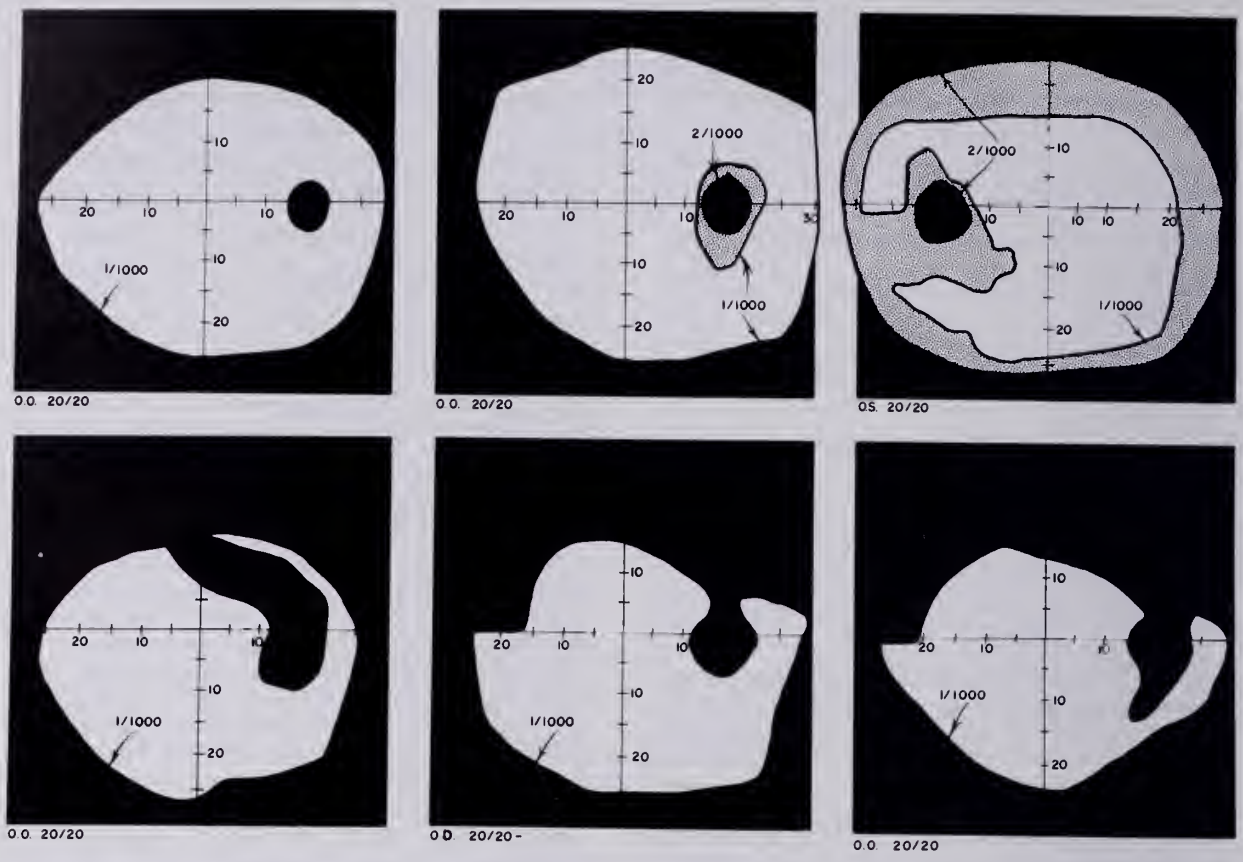
Of these tabulations, Table 4 is the most informative regarding our clinical performance, for it indicates that we are led to suspect the presence of disease in a much larger number of individuals on the basis of the whole battery of tests than on the basis of any one of them alone.

TABLE 4

"Non-suspects"
Number of individuals free from any test value occurring with a frequency of 10 per cent or less in the normal group
214
"Suspects"
Number of individuals who have at least one test value in one eye, that occurs with a frequency of 10 per cent or less in the normal sample or has a P_o/C = or <100
300

This information lacks meaning, however, unless we can answer two questions: "How many of those screened by all of these tests proved to have had glaucoma at the time of the test?" and "How many of the 'glaucomas' were missed through the use of these limits?"

Evidently, we are required to define glaucoma



Samples of the visual-field records obtained by the tangent screen. The size of the target, the extent of the field obtained by it and the visual acuity are shown for each record. The first and second records in the first row are examples of what was considered a normal visual field. The remaining four are examples of what were classified as visual-field defects of the glaucoma type.

by means of criteria independent of test values. Instead of "solving" this complex and decisive question by adding another arbitrary definition of glaucoma, I chose instead to ask the question, "What was our performance in detecting or missing the glaucoma type of visual-field defect?" This choice is justified by the fact that the visual dysfunction of glaucoma is what we are concerned about.

In 1958, visual-field defects of the glaucoma type were found in 29 out of 319 individuals. This past year they were demonstrated in 21 of the 195 new subjects.

A field defect of the glaucoma type was considered to be one of the following (Figure 1):

1. An arcuate scotoma continuous with the blind spot at either pole and twice the size of the normal blind spot.

2. A nasal step that extends towards the blind spot.

Within this framework we can now evaluate the efficiency with which each or all of the tonometer tests can detect or can improve the detection of the glaucoma type of visual-field defect. Table 5 presents a numerical picture of this performance. The entire sample was separated into two major groups. One of them, the "suspects," included all *individuals* whose test values occurred with a frequency of 10 per cent or less in the normal sample, and the other, the "non-suspects," included all of those whose test values occurred with greater than 10 per cent frequency in the normal sample. The composition of each group is then presented in terms of the number of *individuals* it contains who had visual-field defects of the glaucoma type, and the number of those whose visual-field records were normal.

Although this may seem to lead to the conclusion that a surveyor or general practitioner should equip himself with a visual-field test, rather than a tonometer test, the true situation is far too complex to permit us to draw a simple and unqualified conclusion at this stage of our knowledge. Questions having to do with the stability of the findings derived from visual-field and tonometer tests, the validity of generalizations on the basis of a single test performance, and the accuracy of the idea that a type of manifestation of visual dysfunction can have only one cause will have to be answered

TABLE 5

Test	*Not Suspected*			*Suspected*		
	TOTAL NUMBER	NUMBER OF NON-SUSPECTS WITH GLAUCOMA FIELD DEFECT	NUMBER OF NON-SUSPECTS FREE FROM VISUAL FIELD DEFECTS	TOTAL NUMBER	NUMBER OF SUBJECTS WITH GLAUCOMA TYPE FIELD DEFECT IN AT LEAST ONE EYE	NUMBER OF SUSPECTS FREE FROM VISUAL FIELD DEFECTS
Tonometry	386	40	346	128	10	118
Outflow facility	349	30	319	165	20	145
Water drinking test	411	32	379	103	18	85
P_o/C = or <100 after water drinking test	309	25	284	205	25	180
P_o/C = or <100 after water drinking test and/or initial tonography	257	20	237	257	30	227
All tests	214	15	199	300	35	265

empirically before we can start finding our way about in the maze of this subtle disease.

It is these considerations that made us convert this survey into a five-year study, with the hope of obtaining information that will improve our notions about what we are dealing with.

CONCLUSIONS

Before we can succeed or fail at preserving visual function from the destructive effects of glaucoma, determine the values of certain tests designed to help physicians diagnose the disease in its early stages, or evaluate the contributions which have been made or which can be anticipated in the "basic research" in this field, we must start by defining the disease. The definition must be made in terms of demonstrable changes in the stages of the transition from normal visual function to the dysfunction of chronic open-angle glaucoma. These relations, evidently, will need to be explored in a population of individuals with initially normal visual function, in whom the development of a type of visual dysfunction can be studied at regular intervals.

The success of this or similar studies—attempts at defining the normal state, not in terms of demonstrating its presence, but of predicting its continuance—is critically dependent upon maintaining the participation of "normal" individuals who have little apparent need for the various tests. This cooperation requires a quality of health-consciousness and public spirit far superior to that which hitherto has been called for—one that can be achieved only through the active participation of the whole community, including the medical profession, wherever the study is undertaken. The final conclusion may be that there are no infallible tests or combinations of tests for the screening of glaucoma.

The wholehearted and enthusiastic support of the Des Moines-Polk County Health Department and the Polk County Medical Society has been and will continue to be invaluable to the success of this study.

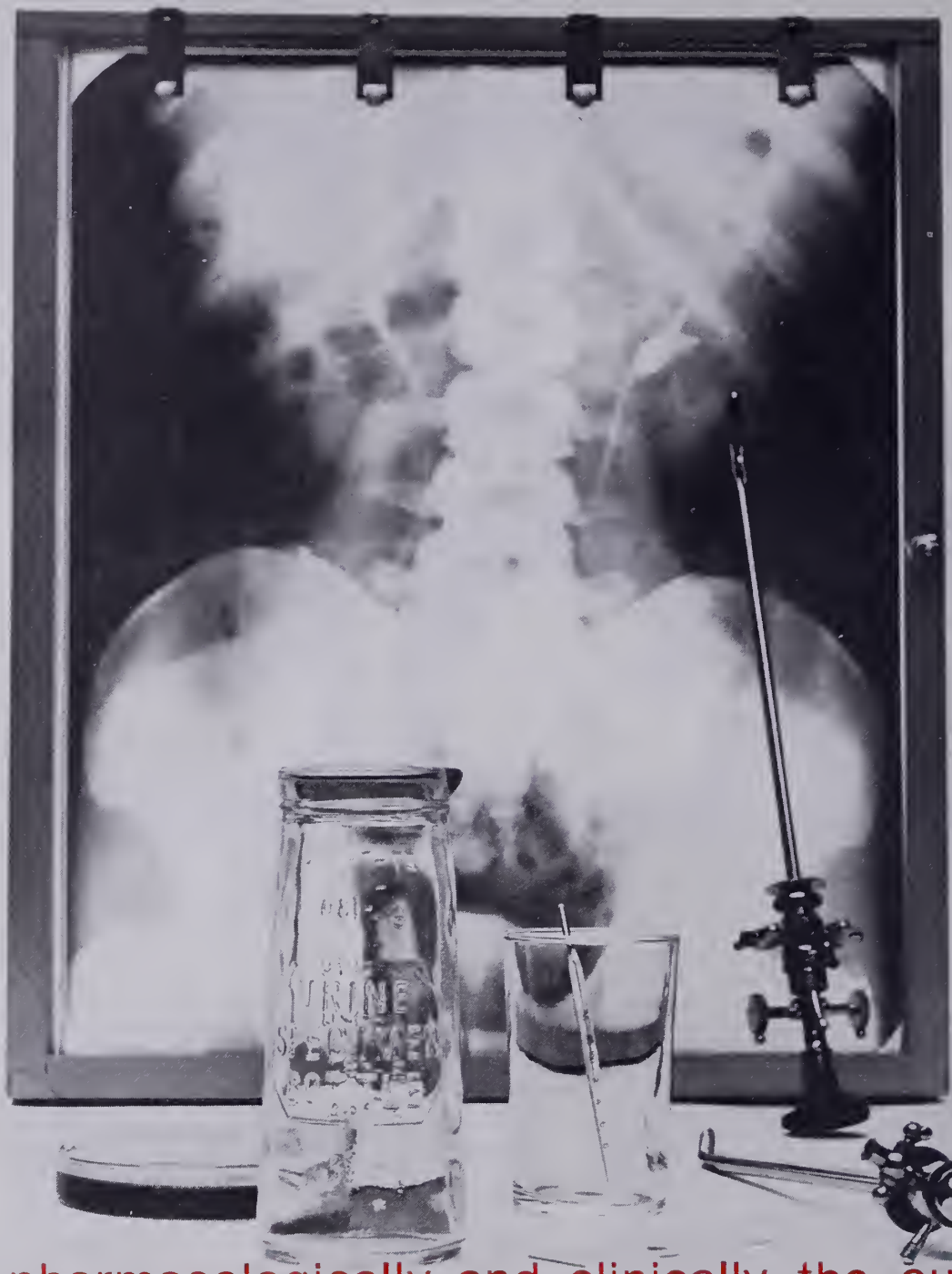
In the area of chronic diseases, we are quickly approaching a turning point in our work. From the detection and treatment of presently existing disease, we are turning to the preservation and perpetuation of the state of health. This change in objective requires a radically different type of knowledge and different technics of investigation from those which have been essential to the diagnosis and management of established disease. We hope that our study is a step in the right direction.

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Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 24-YEAR-OLD MALE college student was admitted to the University Hospitals surgical out-clinic at 10:00 a.m. in a state of shock. He had developed moderately severe epigastric pain on the evening before his admission, and because of the discomfort had gone to bed early. He had slept well during the night, but had awakened in the morning with severe, cramping epigastric pain. Shortly thereafter, he lost consciousness, and was brought to the hospital by one of his friends.

There was no history of trauma or any previous serious illnesses. He had been examined for life insurance three weeks earlier, at which time the only unusual finding had been a rapid pulse. He was said to have a "nervous stomach" from time to time, and once had thought he had an ulcer, but that suspicion had not been confirmed by x-ray studies. He was known to have lost weight while studying hard, but had never had any previous episode of cramping abdominal pain.

On admission, the patient was conscious but apathetic. His skin was pale and waxy in appearance. His pulse was weak, thready and 120 per minute. No blood pressure could be measured. The abdomen was rigid and tender in all quadrants. No masses were palpable. The rigidity increased during the examination and early treatment. The rectal ampulla was empty.

A cut-down for intravenous fluids and blood was done immediately. The patient was placed in shock position, and after a unit of blood had been given, he became oriented and gave his history.

A nasal gastric suction tube was put in place, and drained a brownish fluid that tested 4+ with Meyer's reagent. The hemoglobin on admission was 9.5 Gm./100 ml. of blood, and the white blood cell count was 23,400/cu. mm. The urine contained no sugar, albumin, cells or casts. Flat and lateral decubitus x-ray films of the abdomen showed the psoas shadows to be sharp, but the renal shadows were not visualized. There was gas in the stomach and large bowel, without any distention. The osseous structures as visualized appeared normal.

The patient was taken directly to the operating room from the outpatient clinic, after an initial unit of blood had been given and the blood pressure had risen to 80 mm. Hg. In spite of blood transfusions, he developed irreversible shock, and died approximately one hour after the commencement of a laparotomy.

Blood chemistry studies were reported after the patient had died. The serum calcium was 9.0 mg./100 ml. of blood. The serum amylase was 80 units. The fasting blood sugar was 210 mg./100 ml. of blood. The blood urea nitrogen and electrolytes were within normal limits.

SUMMARY OF CLINICAL DISCUSSION

Dr. Walter M. Kirkendall, Internal Medicine: Our case today presents a good opportunity to review some causes of the acute abdomen. I hope I achieve this purpose, even if I don't obtain the correct diagnosis.

Many years ago as a junior and senior student in medical school, I had a chance to work nights in an emergency room. This duty was in a fairly large general hospital. In the course of two years, my colleagues and I saw and made decisions about the courses of some 300 patients who presented initial symptoms of pain in the abdomen. At that time, I came to the conclusion that a careful history and physical examination which led to a good diagnosis are essential in dealing with patients who have acute abdominal problems. We also found in a good percentage of instances that temporizing with our treatment led us to regret.

In our case today, I gave serious consideration to the following possibilities. First, I gave some thought to perforation of a viscus. The protocol strongly suggests that this man had peritonitis. I considered the possibility of the rupture of a peptic ulcer in the stomach or in the duodenum, or in a Meckel's diverticulum. The possibility that there was a rupture of the gallbladder had to be considered. Among other possibilities that one must consider under these circumstances are rupture of a liver abscess into the peritoneal cavity, the chance that there was volvulus or intussusception, and the chance that some other portion of the gastrointestinal tract may have ruptured, with peritoneal soiling. Although there were few things to suggest it in this instance, our old friend appendicitis should be considered in this portion of the differential diagnosis.

The second group of possibilities revolves about the vascular tree. Could this man have had a vascular accident involving branches of his arterial supply to the intestines, with subsequent ischemic necrosis and perforation of the gastrointestinal tract? Another vascular accident that might have occurred is a dissection of the wall of the aorta or of one of the large vessels in the abdomen, with bleeding, shock and subsequent death.

The third possibility is that the pain and difficulty might have been caused by infection in the

peritoneal cavity. The infection may have started in an intra- or retroperitoneal structure such as the pancreas, with subsequent involvement of other portions of the peritoneal cavity. There is also the possibility of primary inflammation of the peritoneal surfaces, but this is a relatively rare occurrence without associated infection elsewhere, or a systemic disease such as nephrosis.

Besides these three broad categories, one should give passing consideration to the following things. First, it is possible that disease in the thoracic cavity could present with symptoms in the abdomen. In other words, this man could have had pneumonia with peritoneal signs. Could he have had a myocardial infarction or a severe myocarditis with abdominal symptoms such as these? On the basis of the type of pain, the initial shock and the subsequent course of this patient's disease, I think none of these things is a likely possibility. One should also quickly consider a neurological source of pain, such as that coming from tabes dorsalis, which might cause abdominal signs and mirror some of this patient's original complaints. However, his course renders the diagnosis of neurological disease very remote. His history tends to rule out the possibility of trauma to retroperitoneal or peritoneal structures as a cause of his difficulty. It is possible, of course, to have significant trauma to these structures without superficial or skin lesions' appearing. Despite the impossibility of ruling out such traumatic rupture, however, the likelihood is very remote. An esoteric diagnosis such as acute abdominal pain secondary to black widow spider bite occurred to me, since I have seen two such patients, but I don't think it is likely to be the diagnosis in the present case because of the degree of shock and the rapid progress of the illness.

After considering these possibilities, I went back over the protocol with the idea of considering the matter from the standpoint of peritoneal irritation and shock. The shock was of particular interest in this regard. I wondered whether it was a consequence of pain from the peritoneal irritation or peritonitis, whether it was the result of blood-loss alone, or whether a combination of these things caused the sharp fall in blood pressure. Ordinarily, shock from peritonitis is attended by a drop in blood pressure initially, and this fall in blood pressure may be so sudden and severe as to cause the patient to faint. Ordinarily, however, this period of hypotension does not persist. Soon there comes a period of time when the patient gets over these initial symptoms and the blood pressure returns to normal. It is assumed that during this time the vascular tree makes changes to compensate for the loss of circulating fluid, and shock—at least as judged by the blood-pressure cuff—is not present. On the other hand, if pain is very severe, it is possible for the initial symptoms of shock and hypotension to persist, and the patient may succumb without the blood pressure's returning to normal levels. Such a situation may occur when there is extensive inflammatory reaction in the peritoneal cavity, such as that following pancreatitis. Yet, since this is a rare situation, one ought to think seriously about the possibility that blood loss has aggravated shock from peritoneal irritation. This is particularly true since the first hemoglobin drawn on this man was 9.5 Gm. per cent. It is very difficult to reconcile such a hemoglobin value with the picture which this patient presented, as described in the protocol. If this man had peritonitis, he should have lost fluid, but not blood; he should have had hemoconcentration of the circulating vascular compartment. Since these were not the findings, one wonders whether bleeding had taken place in the first stage of the disease. If bleeding had not occurred, one must assume that the patient had been anemic prior to his illness, and we have no reason to make such an assumption. If this patient bled during the early stage of his disease, I am frankly puzzled about where he lost the blood. I assume that his hemoglobin was 15 Gm. per cent at the start of the disease. If, when he was seen, his hemoglobin was 9.5 Gm. per cent, we must make the assumption that he had lost at least a liter to a liter and a half of blood. Since he had no obvious masses, the psoas shadows were not remarkable, he had no blood in his rectum and he wasn't vomiting large quantities of blood, one has considerable difficulty supporting the impression that large quantities of blood were lost acutely.

At this point I should like to ask Dr. Gillies to show the x-rays we have of this patient.

Dr. Carl L. Gillies, Radiology: Although, as you know, the patient was very ill, yet this anteroposterior film of the abdomen is good enough to demonstrate the psoas shadows. No abnormal areas of calcification are present in the abdomen.

The second film was taken with the x-ray beam parallel to the floor, to demonstrate the possibility of free air in the peritoneal cavity. There was none present.

Dr. Kirkendall: Would you very often see peritoneal air in pictures taken in this position?

Dr. Gillies: I think so. If present, I believe free air in the peritoneal cavity would be satisfactorily demonstrated, and we could see it without difficulty.

Dr. Kirkendall: I should like to go into some detail about the various diagnostic possibilities. First, perforated peptic ulcer. This young man had a history of stomach distress which many patients with peptic ulcer will present. Although it was not possible to go into the details of his history, one must consider the possibility very strongly that such a disease had existed before the acute episode. If this were true, it might help explain the patient's symptoms and course. A ruptured peptic ulcer with peritonitis might be the right

diagnosis, but his course was certainly not typical for that disease. In addition, it would be difficult to explain the lowering of the hemoglobin unless there were bleeding into the gastrointestinal tract associated with the ulcer. We have no support for this impression. It is possible that his ulcer might have perforated into the pancreas and set up pancreatitis. Such a situation might better explain the condition than rupture of peptic ulcer into the peritoneal cavity, since associated peritonitis is more likely to cause the severe shock that was seen. Perforation of other portions of the gastrointestinal tract seem less likely to me than peptic ulceration perforation. Since we have no additional leads for rupture secondary to infection or thrombosis, I won't discuss them in detail.

The diagnosis of choice, as far as I am concerned, is acute pancreatitis. Despite my preference for this diagnosis, however, I have considerable difficulty in fitting this patient into the commonly-seen clinical picture. In general, the individual with acute pancreatitis is older than this man. Often these patients are quite obese. I asked Dr. Seebohm to tell me something of this man's diet, and he stated that it was "typically American." I assume from his reply that the patient was not an alcoholic. He also didn't have some of the other things we often see with acute pancreatitis. Jaundice was missing; he had no tumor in the region of the left epigastrium; there were no ecchymoses in the abdominal wall. However, he did have some things which I think are most important. Mainly, I was impressed with the severe, unremitting pain with severe shock. This, I think, is most characteristically seen in acute hemorrhagic pancreatitis, and I believe it to be a hallmark for the disorder. At least in my experience, such a situation has been a major tipoff for this diagnosis, although it is well demonstrated that acute hemorrhagic pancreatitis can occur without pain or profound shock. After this patient died, we had other laboratory evidence presented which might support this diagnosis, for he had a slight depression of the serum calcium and an elevation of the blood sugar. Both of these biochemical changes may occur in acute hemorrhagic pancreatitis.

I should like to mention briefly a few other possibilities. Acute bacterial peritonitis is a rare disorder, primarily seen after bloodstream invasion by the pneumococcus. In recent years, it has been extremely rare, but it cannot be completely ignored. This man's course didn't fit that of a patient with pneumococcal peritonitis, for the typical patient with that disease had a fairly prolonged illness, even when untreated. The diagnosis of dissecting aneurysm intrigues me as an explanation for this man's difficulty because of the drop in hemoglobin and because of his sudden death. Dissecting aneurysms ordinarily occur in persons who have hypertension. They usually are seen in patients in their fifth decade. Many patients will have pain radiating into the leg, arm or neck, and along the course of occluded vessels. They often have neurological difficulties which help one in making the diagnosis. Many have hematuria or oliguria progressing to anuria, which is helpful in focusing attention. All of these things were absent in this man's case. Dissecting aneurysm can occur with unusual disease, such as Marfan's syndrome. This disease is a congenital disorder associated with cardiovascular lesions, chiefly aortic insufficiency, displaced lenses and long spidery fingers or arachnodactyly. Patients with Marfan's syndrome usually are quite tall. This was one of the reasons for my asking Dr. Seebohm whether this man was tall, short, fat or lean. I assume from his answers that this individual couldn't have had Marfan's syndrome. It is possible, however, to have incomplete varieties of this congenital disorder, and on this basis one shouldn't discount the possibility that the patient had weakness in the media of the aorta. If dissection did occur, it is possible that the patient could hemorrhage into retroperitoneal spaces or into peritoneal spaces, causing enough irritation to produce pain. I think the possibility of Marfan's syndrome or of dissection from any cause is unlikely, but on the other hand, I have no good explanation for this man's low hemoglobin.

I come back again to my impression that this man had acute hemorrhagic pancreatitis. There is a possibility that he had a perforated peptic ulcer, perhaps with pancreatitis and gastrointestinal-tract bleeding. Finally, although I think the acute hemorrhagic pancreatitis with bleeding might explain the low hemoglobin, I believe that because of the shock and the anemia I should have to recommend exploration for this patient.

Dr. E. E. Mason, Surgery: I don't quite understand why you would have to look in. We usually don't operate on pancreatitis, we don't operate on primary peritonitis and we don't often operate for atypical Marfan's syndrome.

Dr. Kirkendall: My reason for recommending exploration is that if this patient had a bleeding vessel, I would want to close it off. I know of no way of making sure, under the circumstances, that he didn't have one. Marfan's syndrome is simply one of the possibilities which might lead to rupture of a vessel. It appears to me that in view of the patient's shock and anemia, we had no choice other than to look for a bleeding vessel. I think it takes a man very sure of himself not to recommend surgery when the possibility of a persistently bleeding vessel exists.

Dr. Mason: I can't believe that you would operate on him for Marfan's syndrome with bleeding from the aorta, for I should think that if this were the case the aorta would fall apart wherever you put a stitch in. You must be operating because you don't think you have the right diagnosis. There must be something else that could be helped by surgery.

Dr. Kirkendall: I would operate with one of these three diagnoses in mind, realizing full well that the comments you make might be valid. One should remember, however, that all patients with Marfan's disease don't die of their dissections, and also that there are some causes of vessel rupture other than this disorder. The possibility that he had a persistently bleeding artery takes precedent over all of your objections.

Dr. Mason: This patient was given four bottles of blood in the outpatient clinic, and his pressure rose to 80 mm. Hg. The diagnosis made there was volvulus with gangrenous bowel, or perforated ulcer, or acute hemorrhagic pancreatitis. The patient was taken to the operating room. The surgeon states that the abdomen was completely filled with blood. "Having made the diagnosis of massive intraperitoneal bleeding," he reports, "I occluded the aorta as it came through the diaphragm above the celiac axis for approximately 20 or 30 minutes, during which time the anesthetist and his assistant pumped in a total of approximately six to eight bottles of blood." The patient had a total of 16 units of blood during his treatment. "The aortic pulsations became firmer," the surgeon's notes continue. "After we thought we had restored the majority of his blood volume, I released the aorta and attempted to locate the sources of bleeding. I first palpated the spleen, which felt normal. I got a rather hasty look at it, and it appeared normal. We continued to take aspirated blood from his abdominal cavity, and used lap pads and a sucker. A rent was then made in the gastrocolic omentum, and it became apparent that the bleeding almost entirely was in the lesser sac, so we opened the lesser sac."

Well, what did the patient have, Dr. Aleu?

Dr. F. P. Aleu, Pathology: The main autopsy finding was a ruptured aneurysm of the splenic artery. It was of the congenital type, and no evidence of arteriosclerotic or mycotic components was found. The lesion was located 6 cm. from the splenic hilum, was approximately spherical in shape, and measured 1 cm. in diameter. The area of perforation was irregular and measured 0.5 cm. in the longest dimension. No evidence of other vascular abnormalities was apparent. The vena cava and portal vein were patent, and the liver and spleen had an essentially normal appearance.

The rupture of this aneurysm resulted in a severe, extensive, intraperitoneal hemorrhage involving both lesser and greater peritoneal cavities. The amount of blood recovered from the peritoneum at the time of autopsy was estimated at 1,100 cc. There were also areas of epicardial hemorrhage which were thought to be related to the cardiac massage.

Other autopsy findings included a moderate thymic hyperplasia and focal areas of lipid depletion in both adrenals.

Death was due to the rupture of a congenital aneurysm of the splenic artery, with ensuing hemorrhage and shock.

The fact that this diagnosis has not been included among the clinical possibilities of this case reveals excellent judgment, for these aneurysms are rare. One could expect to find an aneurysm of the splenic artery among no fewer than 37,000 autopsies. The number of cases reported up to 1955 was about 200, and only about nine of them survived.

Microscopically, the ruptured area was surrounded by recent hemorrhage, and there was no discernible evidence of hemosiderin pigment that would have implied previous bleeding episodes. Foci of calcification, atheromatous deposits or clumps of bacteria were not observed. A section of the pancreas revealed an essentially normal parenchyma partially surrounded by recently extravasated red blood cells.

Sections from the thymus showed that the usual involution did not occur, and microscopic examination of the adrenals revealed focal areas in the cortex in which lipoid droplets were scanty. This—usually referred to as lipid depletion—occurs in patients with shock, but the time sequence in this particular case does not follow the accepted pattern. Usually, after a condition of shock has been established, the adrenal glands are somewhat enlarged for a period of time approximating 18 hours, and afterward the exhaustion of the functional reserve causes loss of lipids. What I am about to say is pure speculation, but perhaps this patient did have some degree of hypoadrenalism. This, associated with a large thymus gland and enlarged lymph nodes, would put this young man into the group of "poor biological units." It is possible that this may have had some relation to the establishment of irreversible shock and terminal cardiac arrest, in spite of the fact that the blood replacement was generous and reasonably prompt.

Dr. Mason: Within a half to three-quarters of an hour from the time an incision was made, and at about the time that ligatures had been placed around the bleeding area, the anesthetist observed that the heart had stopped. The chest was opened, and the heart was found to be dilated. Massage was started without opening the pericardium, but I think we can suppose that the patient did not have fibrillation. At least when the pericardium was opened, the heart was found to be big and flaccid.

Dr. Lawrence, you were called into the operating room to assist in resuscitation. I wonder whether you have anything to add. Why did the heart stop? Is there any hope of getting such a heart started again?

Dr. M. S. Lawrence, Surgery: In attempting to revive this patient's heart, we noted when we first started to massage it that the ventricles were empty. The patient had lost a tremendous amount of blood, even though there had been an attempt to replace this blood loss. After massaging the

heart for about 20-25 minutes and giving more blood, we were able to feel that we were moving a fair volume of blood through the ventricles, the aorta and the pulmonary arteries. We also noted that the heart remained flabby. There was no cardiac response to the massage. The heart did not fibrillate. We stimulated the heart with adrenalin, and nothing happened. We have noted that in cases of complete standstill without ventricular fibrillation, if we administer adrenalin to the left ventricle or even to the aorta so as to perfuse the coronary arteries, and if the heart does not fibrillate and remains somewhat cyanotic, it is usually impossible to revive the patient. We continued this procedure for 35 or 40 minutes, but got no response from the heart. We think that this patient had lost a very large amount of blood, and as I have said before, I have seen a large number of traumatic accidents and a large number of disastrous operative procedures, but I have never seen so much blood on the floor as was there in this case. I imagine that there were six or seven units of blood on the drapes, on the floor and on the operators. Even though they had attempted to replace the blood initially, the patient didn't get enough blood to keep his cardiac filling and coronary perfusion at a rate that would permit the massaging to do any good. By the time he did get enough blood, it was too late.

Dr. Mason: Dr. Hamilton, would you say something about the way in which the anesthesia was handled? Could it have had anything to do with the way this heart acted? Do you think anything else might have been done in the operating room to save this patient?

Dr. W. K. Hamilton, Anesthesiology: This patient arrived at the operating room with an unobtainable blood pressure, and had an unobtainable blood pressure during the entire procedure. The pulse rate, as I recall, was counted in the neighborhood of 110. I would agree with Dr. Lawrence that this was the bloodiest procedure I have ever seen. We're not unaccustomed to some blood loss, but this was very impressive. Originally, the patient was obtunded from shock, and we started out without any anesthesia at all. He was just "near death," if you will, at the time the procedure was started. I think he had a minimum of depressing drugs, and the anesthesia had very little part in the "cardiac arrest," if you want to call it that.

I think there is another possibility that may help explain both the condition of the heart when found, and the failure of the heart to respond to treatment. This is brought about by the problem which one sees with massive transfusion of citrated blood. Dr. Hardin is sitting back there, and I don't know whether or not he will agree with what I am about to say, but there is considerable evidence accumulating which shows that large amounts of citrated blood should probably be covered to some extent by calcium. This patient received none. We have had the policy of administering none in the past, but perhaps it's time for a change.

The evidence is not yet conclusive, but if one stops to think about this situation, he realizes that a calcium deficiency may have been present. Electrocardiograms of patients who have been given massive transfusions provide suggestive evidence, and there is an occasional patient in whom recovery is seen to coincide exactly with the administration of calcium. This might have been considered in the patient now under discussion, and might have been of benefit.

These ideas, however, are not intended to minimize the probability that this patient bled to death. I think that this is what happened. Yet, when faced with patients who must have multiple transfusions, this is something we ought to consider.

Dr. Mason has asked about the potassium. I believe the evidence shows that potassium is not the big factor in this problem. The stored bank blood has large amounts of potassium in it. As you know, Dr. Hardin has suggested that rapid infusion of blood should not increase serum potassium concentration. This has been the finding of other people who have studied this problem and who have seen enough citrate given to depress the ionized calcium in the blood seriously. The fact that tetany does not appear in patients of this type who are in severe shock doesn't seem surprising to me, for either anesthesia or severe shock would depress the peripheral manifestations that are usually seen as tetany.

Another problem concerns the administration of cold blood. I don't think we know what this does. We know that hypothermia at times tends to promote arrhythmia, perhaps with cardiac arrest. We have given large amounts of cold blood, and I don't know the answer to this question. People who have made a study of citrate toxicity have suggested that when the liver blood flow is impaired, transfusions of citrate appear to be more dangerous, and this patient, of course, had poor blood flow due to clamping of the aorta as it came through the diaphragm. I think it has been found that the *rate* of infusion of bank blood is important—probably more important than the total amount.

Again, I say that I have suggested this only as a possible contributing factor. Along with Dr. Lawrence, I believe that this fellow bled to death. To people who weren't in the immediate vicinity, the administration of 16 to 17 bottles of blood may seem to have been overtransfusion, but it didn't appear so at the time and I believe Dr. Aleu will confirm this from his observations at post. Was there no evidence of congestion or circulatory overload?

Dr. Aleu: No.

Dr. Mason: How good is your evidence? Can you say from the postmortem findings that the patient wasn't overtransfused?

Dr. Aleu: There was no evidence of pulmonary edema, pulmonary congestion or other congestion. If anything, what the patient needed was blood.

Dr. Robert C. Hardin, Internal Medicine: There are just two or three points that I should like to mention. One is that the low hemoglobin would have to be taken as evidence—as Dr. Kirkendall took it—that this patient had bled for some time before he entered the hospital. The people who treated him were behind, by a considerable amount, at the start. People who bleed slowly may not go into shock—that is to say clinical shock with a lowered blood pressure—but may suddenly do so if they bleed just a little more than usual from an incident in moving about, or something like that. Another pint of blood loss will throw them into profound shock. It is a useful rule of thumb that if one has an individual like this who doesn't come out of shock following the administration of a reasonable amount of blood—say about four pints—the answer one must pick from all of the possibilities is that he is still bleeding. I think this is another bit of important evidence in this case.

Another point is the possible effect of massive transfusions on this man. I think we can say, now that we have all of the facts before us, that he had an exchange transfusion, or probably two exchange transfusions. The tying up of calcium in the blood with citrate does produce profound effects on the heart. This is most evident in exchange transfusions in infants. One can tell from the heart sounds when the baby needs some more intravenous calcium.

So far as potassium is concerned, I would doubt that this man's serum potassium was raised by the giving of blood, although our experimental work a good many years ago in this field didn't envision the giving of 16 pints of blood, and thus I'm really not sure of my ground. In giving large amounts of potassium intravenously in the form of blood that was very old, we were unable to raise the serum potassium of patients. I should think that there is a distinct possibility that this man had some arrhythmia on the basis of lack of calcium, but I should doubt that the potassium level had very much to do with it.

Dr. Mason: Was there any reason for choosing cyclopropane in preference to pentothal?

Dr. Hamilton: We think that it will allow the circulatory system to maintain its own integrity better than will any other agent. There is less depression of vascular response to hemorrhage. In addition, the pentothal mixture, being non-volatile, would have had to be metabolized if the patient were to get rid of it. Cyclopropane is rapidly eliminated and has, I believe, a less depressive effect on the circulation than have the other drugs that were available.

Dr. John A. Gius, Surgery: I want to ask whether there wasn't some delay in bringing the patient to the hospital.

Dr. Mason: Well, all that we can say is the obvious. Every bit of time would have been worth saving.

I was thinking just now about the matter of getting an x-ray. One of the diagnoses was perforated ulcer, but are we justified in delaying in cases where we would operate regardless of whether the x-ray showed air or not? Also, when the patient is in mild shock, as Dr. Hardin mentioned, a little bit of movement or manipulation may cause him suddenly to decompensate and go into more profound shock. I think that there might have been justification for not getting any x-rays, and that some time might thus have been saved.

Dr. Kirkendall followed a line of thought similar to that of the people in Admissions, and demonstrated that it is difficult for any of us to make up our minds in a hurry under such trying circumstances. Could *you* bring this patient into the hospital and take him directly to the operating room after little more than noticing his waxy color, feeling his rigid abdomen and knowing that he was in profound shock? Obviously this could have been done, and the outcome might have been better, but we must do a little thinking, we have to make a few examinations, and we need to get blood.

Four bottles of blood were given to the patient in Admission. We hear once in a while about a person's having a cardiac arrest in the wards or on the front steps of the hospital, and of a physician's making the diagnosis, opening the chest, massaging the heart and getting things started again. Maybe there are times when one would be justified in opening the abdomen in the emergency room, but usually such surgery is too complicated. Dr. Tidrick, would you like to comment on that?

Dr. R. T. Tidrick, Surgery: Ordinarily there would be someone close by to attend such a patient. If the personnel of the emergency clinic know that a patient in shock is coming, they can be set to get blood made available very quickly after the patient gets here. We certainly don't want to condone any delay in such an instance, but there are not too many places where an emergency laparotomy could be performed in the outpatient emergency room. I would agree with you regarding this type of situation. On the whole, trying to perform a laparotomy in the emergency room means attempting it with inadequate equipment, lack of suction, and insufficient lighting and instruments. In the instance under discussion, I don't believe it would have been possible for us to cope with the situation under such conditions.

SUMMARY OF NECROPSY FINDINGS

The main autopsy finding was a ruptured aneurysm of the splenic artery. This resulted in a severe, extensive intraperitoneal hemorrhage that ended in shock and death. The aneurysm was located 6 cm. from the splenic hilum. It was approximately spherical and measured 1 cm. in diameter.

The area of perforation was irregular and measured 0.5 cm. in the largest dimension. There were surgical sutures at the efferent and afferent openings of the aneurysm. No evidence of other vascular abnormalities was found. The vena cava and portal vein were patent, and the liver had a normal appearance.

Other autopsy findings included a moderate thymic hyperplasia and focal areas of lipid depletion in both adrenals.

Epicardial petechiae related to the cardiac massage were also present.

Death was due to the rupture of a splenic aneurysm, with ensuing hemorrhage and shock.

ANATOMICAL DIAGNOSES

1. Ruptured aneurysm, splenic artery, with hemoperitoneum
2. Foci of lipid depletion in glomerulosae of both adrenal glands
3. Thymic hyperplasia, mild
4. Status post-laparotomy
5. Status post-thoracotomy.

Fourth National Cancer Conference

The Fourth National Cancer Conference will be held at the University of Minnesota, Minneapolis, September 13-15, 1960. The theme of the Conference is "Changing Concepts Concerning Cancer," and more than 2,000 scientists and physicians from the United States and abroad are expected to attend. The Conference is sponsored jointly by the American Cancer Society and the National Cancer Institute of the Public Health Service, Department of Health, Education, and Welfare.

The Conference will focus on three general topics—etiology, pathogenesis and spread, and therapy of malignant disease. In addition, panels of scientists will discuss the state of knowledge of the leukemias and lymphomas, and cancer of the breast, lung, gastrointestinal tract, genitourinary system, head and neck, and skin. Other panels will be devoted to cancer control and the role of environmental factors in the occurrence of cancer.

Interested scientists and physicians are invited to attend. Copies of the Conference program and registration cards may be obtained from the National Cancer Conference Coordinator, American Cancer Society, 521 West 57th Street, New York 19, N. Y.

PRELIMINARY PROGRAM

Tuesday, September 13

9:15- 9:50 a.m.
"Changing Concepts Concerning Cancer"
Dr. Michael B. Shimkin, Bethesda, Maryland

10:00 a.m.-12:30 p.m.
CANCER ETIOLOGY
Chairman: Dr. Howard B. Andervont, Bethesda, Maryland
Panelists:
Sir Alexander Haddow, London, England
Dr. Kelly H. Clifton, Madison, Wisconsin
Dr. W. E. Heston, Bethesda, Maryland
Dr. Hilary Koprowski, Philadelphia
Dr. Arthur C. Upton, Oak Ridge, Tennessee

1:30- 5:00 p.m.
CANCER OF THE BREAST
Chairman: Dr. Edward F. Lewison, Baltimore
Summary Session Participant: Dr. Alfred M. Popma, Boise, Idaho
Treatment End Results Reporter: Dr. Robert C. Hickey, Iowa City, Iowa
Panelists:
Dr. Abraham Lilienfeld, Baltimore
Dr. Jerome Urban, New York, New York
Dr. Vincent P. Collins, Houston, Texas
Dr. Robert A. Huseby, Denver, Colorado
Dr. Ian Macdonald, Los Angeles, California
Dr. Donald B. Shahon, Minneapolis

CANCER OF THE LUNG
Chairman: Dr. Alton B. Ochsner, New Orleans, Louisiana
Summary Session Participant: Dr. Arthur J. Vorwald, Detroit, Michigan
Treatment End Results Reporter: Dr. Walter L. Mersheimer, New York, N. Y.
Panelists:
Dr. Dean Davies, New York, N. Y.
Dr. Oscar Auerbach, East Orange, New Jersey
Dr. Katharine Boucot, Philadelphia
Dr. Richard Overholt, Boston
Dr. James J. Nickson, New York, N. Y.

1:30- 5:00 p.m.
CANCER OF THE FEMALE GENITAL TRACT
Chairman: Dr. Joe V. Meigs, Boston, Massachusetts
Summary Session Participant: Dr. John L. McKelvey, Minneapolis, Minn.
Treatment End Results Reporter: Dr. Howard B. Latourette, Iowa City, Ia.
Panelists:
Dr. H. R. Pratt-Thomas, Charleston
Dr. Alexander Brunschwig, New York
Dr. Milford Schulz, Boston, Massachusetts
Dr. John G. Masterson, Brooklyn
Dr. Joseph H. Pratt, Rochester, Minnesota
Dr. Hans-Ludwig Kottmeier, Stockholm Sweden

Wednesday, September 14

9:00- 9:50 a.m.
"Frontiers in Biology and Cancer Research"
Dr. George W. Beadle, Pasadena, California

10:00 a.m.-12:30 p.m.
CANCER PATHOGENESIS AND SPREAD
Chairman: Dr. Warren H. Cole, Chicago, Illinois
Panelists:
Dr. Leslie Foulds, Buckinghamshire, England
Dr. George E. Moore, Buffalo, New York
Dr. Lauren V. Ackerman, St. Louis
Dr. Philippe Shubik, Chicago, Illinois

1:30- 5:00 p.m.

CANCER OF THE GASTROINTESTINAL TRACT

Chairman: Dr. I. S. Ravdin, Philadelphia Pennsylvania

Summary Session Participant: Dr. Joel W. Baker, Seattle, Washington

Treatment End Results Reporter: Dr. Charles B. Clayman, Chicago, Ill.

Panelists:

Dr. Clifford Barborka, Chicago, Illinois
Dr. Gordon McNeer, New York, New York
Dr. William Longmire, Los Angeles
Dr. J. Englebert Dunphy, Portland, Oregon
Dr. Philip Hodes, Philadelphia

CANCER OF THE MALE GENITOURINARY TRACT

Chairman: Dr. Reed M. Nesbit, Ann Arbor

Summary Session Participant: Dr. Herbert Brendler, New York, N. Y.

Treatment End Results Reporter: Dr. N. Henry Moss, Philadelphia, Pa.

Panelists:

Dr. Nicolai Blokhin, Moscow, USSR
Dr. Willard Goodwin, Los Angeles, California
Dr. Wyland Leadbetter, Boston, Massachusetts
Dr. Donald McDonald, Rochester, New York
Dr. Willet Whitmore, Jr., New York, New York
Dr. Eric Boyland, London, England

LEUKEMIAS AND LYMPHOMAS

Chairman: Dr. Sidney Farber, Boston, Massachusetts

Summary Session Participant: Dr. Alfred Gellhorn, New York, N. Y.

Treatment End Results Reporter: Dr. Robert J. Rohn, Indianapolis, Ind.

Panelists:

Dr. M. Vera Peters, Toronto, Canada
Dr. Mila Pierce, Chicago, Illinois
Dr. Sarah E. Stewart, Bethesda, Maryland
Dr. Johannes Clemmesen, Copenhagen
Dr. R. Wayne Rundles, Durham, North Carolina

8:00-10:00 p.m.

CANCER IN THE WORLD AROUND US

Chairman: Dr. John R. Heller, Bethesda, Maryland

Air Pollution: Dr. Lester Breslow, Berkeley

Industrial Carcinogens: Dr. Norton Nelson, New York, New York

Food Additives and Contaminants: Dr. Eric Boyland, London, England

Radiations, Natural and Man-made: Dr. Arthur C. Upton, Oak Ridge, Tenn.

Smoking and Other Habits: Dr. Abraham Lilienfeld, Baltimore, Md.

Thursday, September 15

9:00- 9:50 a.m.

"Care of the Advanced Cancer Patient"

Dr. Herman E. Hilleboe, Albany, New York

10:00 a.m.-12:00 noon

CANCER THERAPY

Chairman: Dr. Owen H. Wangensteen, Minneapolis, Minnesota

Treatment End Results Reporter: Dr. Sidney J. Cutler, Pittsburgh, Pa.

Panelists:

Dr. Albert Segaloff, New Orleans, Louisiana
Dr. Ralph Jones, Miami, Florida
Dr. Michael J. Brennan, Detroit, Michigan
Dr. John B. Graham, Buffalo, New York
Dr. George T. Pack, New York, New York
Dr. Franz T. Buschke, San Francisco, California

1:00- 3:00 p.m.

CANCER OF THE SKIN

Chairman: Dr. Thomas B. Fitzpatrick, Boston, Massachusetts

Summary Session Participant: Dr. Eugene Van Scott, Bethesda, Maryland

Treatment End Results Reporter: Dr. Edward T. Krementz, New Orleans, La.

Panelists:

Dr. Hermann Pinkus, Detroit, Michigan
Dr. Herbert Lund, Greensboro, North Carolina
Dr. John Stehlin, Jr., Houston, Texas
Dr. Francis Lynch, St. Paul, Minnesota
Dr. Helen Curth, New York, N. Y.

CANCER OF THE HEAD AND NECK

Chairman: Dr. William S. MacComb, Houston

Summary Session Participant: Dr. Edgar Frazell, New York, N. Y.

Treatment End Results Reporter: Mr. George Linden, Berkeley, Calif.

Panelists:

Dr. Danely Slaughter, Chicago, Illinois
Dr. H. Mason Morfit, Denver, Colorado
Dr. Milton T. Edgerton, Baltimore, Maryland
Dr. R. Lee Clark, Jr., Houston, Texas
Dr. J. W. J. Carpender, Chicago, Illinois

CANCER CONTROL

Chairman: Dr. John R. Heller, Bethesda, Maryland

Summary Session Participant: Dr. David A. Wood, San Francisco, Calif.

Panelists:

Dr. Anthony R. Curreri, Madison, Wisconsin
Dr. Emerson Day, New York, New York
Dr. E. Cuyler Hammond, New York, New York
Dr. Lewis C. Robbins, Washington, D. C.
Dr. Paul E. Boyle, Cleveland, Ohio
Dr. Mack I. Shanholtz, Richmond, Virginia

3:00- 5:00 p.m.

SUMMARY SESSION

Chairman: Dr. Eugene P. Pendergrass, Philadelphia, Pennsylvania

Panelists:

Dr. Alfred M. Popma, Boise, Idaho
Dr. Arthur Vorwald, Detroit, Michigan
Dr. John L. McKelvey, Minneapolis, Minnesota
Dr. Joel W. Baker, Seattle, Washington
Dr. Herbert Brendler, New York, New York
Dr. Alfred Gellhorn, New York, New York
Dr. Eugene Van Scott, Bethesda, Maryland
Dr. Edgar Frazell, New York, New York
Dr. David A. Wood, San Francisco, California



SURVEY OF MEDICAL STUDENTS AT S.U.I. SHOWS TREND TOWARD SPECIALIZATION

A study made by THE DAILY IOWAN indicates that the seniors who were graduated this spring at the S.U.I. College of Medicine are following what has become a national trend toward specialization.

Of the 104 seniors, 88 filled out questionnaires regarding their career preferences. Forty of them said they wished to become specialists, and 24 said they hoped to be general practitioners. The remaining 24 indicated that they were undecided, but 20 of them said they probably would seek specialty training. Over all, then, of the 88 who responded, just 28 were attracted by general practice, and 60 had more or less firmly made up their minds to enter one or another of the specialties.

The statement that there is a national trend toward specialization can be substantiated by counts of names in successive issues of the AMERICAN MEDICAL DIRECTORY. In 1950, 96,000 American doctors were listed there as general practitioners, and 55,000 as specialists. In the most recent edition of the book, 1958, 90,300 were classified as general practitioners, and 77,000 as specialists.

The graduating seniors were asked to explain their choices. Fourteen of the 40 who said they have definitely chosen to become specialists indicated a belief that it is necessary for a doctor to concentrate on one field in order to acquire a deep enough knowledge of his subject to treat his patients satisfactorily. The other most prominent reason, offered by 11 of the 40, was simply that a special interest had dictated concentration upon a single area of medicine. For example, one said, "I plan to specialize in psychiatry because of an interest in the field, not because of any negative attitude toward general practice." Four of the seniors said they think that socialized medicine will come soon, and that such a system is more likely to reward the specialist than the generalist.

Many of those who decided to go into general practice say they are attracted to it for exactly the same reasons that repel the specialists-to-be—the opportunity that general practice offers for work of many different sorts. "I enjoy many phases of medicine too much to restrict myself to the practice of any one of those phases," said one. The reason most frequently offered was the close patient-doctor relationship that general practice offers. Though some of those who intend to specialize cited the trend in that direction as having dictated their choice, several of those who intend becoming general practitioners said they feel there is a great need for additional GP's.

As for the sizes of towns in which the would-be specialists intend to settle, 28 said they would choose ones with 30,000 or more people; 9 would select ones having between 20,000 and 30,000; and none would choose a smaller center. Of the would-be general practitioners, 11 said they would select towns of fewer than 10,000 people; eight expressed a preference for cities of 10,000-20,000; and none would choose cities of 30,000 or more people.

EXPENDITURES ON MEDICAL RESEARCH

National spending on medical research, which will hit a record $715,000,000 this year, is about eight times higher today than it was in 1947, according to the most recent issue of PATTERNS OF DISEASE, a Parke, Davis & Company publication for the medical profession. Chiefly responsible for the sharp rise is the federal government, which was once a relatively modest supporter of medical research but now gives more money for that purpose than all other sources combined.

Support from elsewhere has also climbed. Last year, the pharmaceutical industry spent $190,000,000 on research and development—50 per cent more than in 1957. Of that total, $15,300,000 was for research outside the companies' own laboratories. In addition, the industry allocated $5,950,000 in 1959 for unrestricted gifts and grants to schools and hospitals, and $2,000,000 for contributions to organizations such as the National Fund for Medical Education, which support medical and related schools. Contributions by foundations, health agencies and other private philanthropies have also increased. During the 1947-1959 period, allocations for medical research from those instrumentalities rose from $25,000,000 to $90,000,000.

Where is the money used? According to PATTERNS, universities, medical schools, research institutes and hospitals got 49 per cent, compared to industry's 32 per cent and the government's 19 per cent.

The basic sciences, once the stepchild forced to subsist on scraps, now can indulge virtually every whim. Statistics cited in the publication show that of grants distributed to academic institutions, 45.6 per cent go to support research in the biosciences, compared with 21.3 per cent for clinical specialties and 15.0 per cent for general medicine. One survey of 173 of the larger colleges and universities is reported as having shown that about two-thirds of available funds were spent on basic research, and another survey showed that medical schools de-

voted almost four-fifths of research funds to basic projects.

Growing recognition of the vital importance of basic research is reflected in the rapid increase in recent years of grants made by the National Science Foundation, the only federal agency that is committed solely to basic studies. In 1958, grants amounting to $10,881,130 were awarded by the Foundation for biological and medical research, compared with only $762,675 in 1952.

Though financial backing for medical research has improved significantly over the past few years, a critical problem remains—the acute shortage of well trained personnel. Though 20,000 professional research workers are currently engaged in medical research, PATTERNS estimates that an additional 25,000 scientists will be needed by 1970 if the projected expansion in the work is to be achieved. However, present training facilities will provide only 19,000.

One hopeful trend is noted in this connection: that the numbers of medical school graduates entering either research or teaching, or both, is steadily increasing. Of 1935 graduates, only 2.3 per cent were engaged in research or teaching when surveyed 15 years later. It is estimated that about 8 per cent of medical school graduates currently enter these fields.

A VANISHING DISEASE

Several years ago, before penicillin, bronchiectasis was a fairly common disease. Presumably it began with lung damage sustained during a childhood disease. As time passed, the infection and damage to the smaller bronchi and the bronchioli increased.

The fundamental clinical characteristic of bronchiectasis was cough productive of large amounts of foul sputum, and that dreadful sputum made social outcasts of many. Hemoptysis was not unknown, and recurrent pneumonia was common. Postural drainage was the mainstay of treatment. All this is well remembered by past generations of doctors.

With the advent and development of lung surgery, attempts were made to resect the involved segments of lung. Precise localization by bronchography made this reasonable. But serious postoperative infections dampened enthusiasm. Then came antibiotics and control of infection, and the surgery became tolerably safe. Everyone with a cough and bronchographic evidence suggestive of bronchiectasis found himself face to face with a surgeon. As something new gradually became something familiar, a balance in the indications for surgery was reached. Surgery was good if the sputum was profuse and foul, or if recurrent pneumonia or hemoptysis occurred. Surgery was no good if the cough was non-productive, if the x-ray evidence was minimal, and if chest pain was the chief complaint, for it helps very little to cure an x-ray while leaving the patient his symptoms.

The foregoing brief history of bronchiectasis illustrates the pioneering, the trial and error, the initial enthusiasm, and the ultimate mature judgment and triumph so common in medicine. But just when we learned how to treat it, the disease vanished. Those penicillin shots given to kids at the drop of a hat apparently did it.

HOW TO HANDLE A FEDERAL EMPLOYEE GROUP CLAIM

The United States government has completed enrollment of the largest single employee group ever protected under a health plan, and many federal employees and eligible members of their families in this area were enrolled in Blue Cross-Blue Shield with effective dates ranging through the first 14 days of last month. It is not known exactly when they will receive identification cards, but in a program of this magnitude there will, of necessity, be some delay.

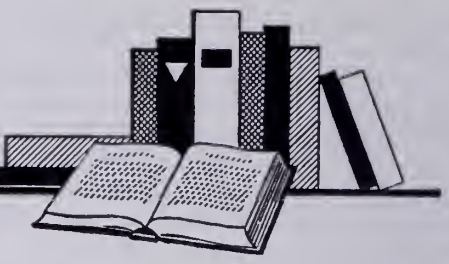
If a federal employee or eligible member of his family requires professional services before his Blue Cross-Blue Shield identification card has reached him, doctors are asked to delay submission of the claim report (DSR) until he can provide the identifying numbers. Blue Shield will be unable to process claims through the national wire communication system without first having these identifying numbers.

Upon receipt of the claim, properly identified, Blue Shield will draft a check for its liability direct to the participating physician in the usual manner. If the services of a non-participating physician have been utilized, it will make payment direct to the federal employee, as is its usual operating procedure.

The Blue Shield program for federal employees is of the indemnity type, and it is being administered by Iowa Medical Service for the national program. There are high-option and low-option programs, with $300 and $200 schedules, respectively. Iowa Blue Shield suggests that the doctor list his usual, customary and reasonable charge on the Doctor's Service Report form, just as he does with all his other Blue Shield claims. Payment will be made in accordance with the contract liability.

In addition to this basic coverage, these employees will have a major medical with a $100 or $200 corridor before such benefits become effective. However, any claims for services that would fall into this category, such as orthopedic appliances, private duty nursing, ambulance fees, etc., should be forwarded direct to Group Hospitalization, Inc., 14th and L Streets, Washington 5, D. C. for determination of liability. Iowa Medical Service will not be processing major medical claims.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

THE YEAR BOOK OF ENDOCRINOLOGY (1959-1960 Year Book Series), ed. by *Gilbert S. Gordan*, M.D. (Chicago, The Year Book Publishers, Inc., 1960. $8.00).

OFFICE DIAGNOSIS, by *Paul Williamson*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $12.50).

CURRENT SURGICAL MANAGEMENT II, ed. by *John H. Mulholland*, M.D., *Edwin H. Ellison*, M.D., and *Stanley R. Friesen*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $8.00).

BEDSIDE DIAGNOSIS, FIFTH EDITION, by *Charles Seward*, M.D. (Baltimore, The Williams and Wilkins Company, 1960. $6.00).

DISEASES OF THE NEWBORN, by *Alexander J. Schaffer*, M.D., and *Milton Markowitz*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $20.00).

GROWING UP TO LOVE, SEX AND MARRIAGE, by *Sidney Sands*, M.D. (Boston, The Christopher Publishing House, $3.00).

BOOK REVIEWS

SURGICAL ANATOMY OF THE BRONCHOVASCULAR SEGMENTS, by *William E. Bloomer*, M.D., *Averill A. Liebow*, M.D., and *Milton R. Hales*, M.D. (Springfield, Illinois, Charles C Thomas, 1960. $16.50).

This book is primarily an atlas with pictures and diagrams of plastic casts of the bronchial tree and the pulmonary vessels. The first chapter describes and illustrates the bronchovascular anatomy as demonstrated radiographically. A set of stereoscopic color slides can be purchased as a supplement to the book.

The material contained is anatomical, as the title indicates. If we presume that all knowledge is good, then the content of this volume is good. But interest in it will be limited to anatomists and those heroic souls who are engaged in lung surgery.

The number and complexity of the air and vascular channels of the lung, as vividly demonstrated by the illustrations, are bewildering. Equally baffling is much of the descriptive commentary, an example of which, selected more or less at random, is as follows: "An accessory sub-superior bronchus arises from the posterior aspect of the posterior basal bronchus (in which case it is designated BX*(10)) or the lateral basal bronchus (in which case it is designated BX*(9)) to supply the middle level of the posterior costal surface between the superior and basal segments in 77 per cent of right lungs."

It is perhaps well that a book such as this has been published after, rather than before, the development of lung surgery. Even the hardiest of pioneers would surely have hesitated if he had known how really tough the anatomy is!—*Daniel F. Crowley, Jr.*, M.D.

ANTIBIOTIC THERAPY FOR STAPHYLOCOCCAL DISEASES, by *Henry Welch*, M.D., and *Maxwell Finland*, M.D. (New York, Medical Encyclopedia, Inc., 1959. $4.50).

Staphylococcal infections are not a new problem, but are a subject of renewed interest. This volume is entirely a discussion of the role of antibiotics in the management of such problems.

The use of the earlier antibiotics such as penicillin, streptomycin, the tetracyclines, Chloromycetin and bacitracin is discussed briefly. There is a short chapter on erythromycin and Ilosone. The editors have included detailed discussions of novobiocin and of the less familiar oleandomycin, vancomycin, ristocetin and kanamycin. Enough information about the pharmacology, antibacterial activity, cross resistance, etc. is included to familiarize the clinician with what he can expect from their use.—*Loren G. Peterson*, M.D.

CURRENT THERAPY—1960, ed. by *Howard F. Conn*, M.D. Philadelphia, W. B. Saunders Company, 1960. $12.00).

CURRENT THERAPY, in its few short years of existence, has become an almost indispensable classic for the practicing physician. It is a rather large volume that encompasses short descriptions and digests of the treatment of most of the diseases common to man. Each disease is discussed by an eminent authority in his field, and there are over 100 authors annually. On the inside covers are tables of normal laboratory values, and at the end of the book there are tables of pediatric dosages and of metric and apothecary equivalents. Each year, the list of authors is altered somewhat so as to avoid repetition of prejudices and so as to give a "new look" to each volume.

Each year new subjects are added and some are deleted. This year, for example, "Salmonelloses (other than Typhoid Fever)," "Recommended Schedule of Routine Immunizations," "Viral Pneumonias," 'Sinusitis" and "Viral Infections of the Respiratory Tract" are among those that have been added, and "Beryllosis" and "Scorpion Sting" that were previously included have been omitted. Dr. Conn's attempt has been to keep successive issues of the book up to date, and to lend emphasis where emphasis is due.

For one not acquainted with the book, I suggest that the excellence of the "make-up," the timeliness of the material and the authoritativeness of the descriptions should be enough to demonstrate that the book must be in the offices of all practicing physicians.—*Daniel A. Glomset*, M.D.

THE OLDER PATIENT, ed. by *Wingate M. Johnson,* M.D. (New York City, Paul B. Hoeber, Inc., 1960. $14.50).

This new book on the problems and diseases of the older patient is a compendium of the opinions of 21 authors. It attempts to list all the common diseases to which the older patient is heir, and to generalize about old age and its problems. The book itself is excellently made up, with large print and adequate subheadings. There are many illustrative pictures and diagrams. The descriptions of disease conditions are necessarily brief and rather numerous.

The difficulty in presenting a book that attempts to cover all the diseases known to affect older people is that older people, of course, have all the diseases known to adulthood, plus the degenerative diseases more or less peculiar to their stage of life. Consequently, much that the book contains is rather elementary and brief. For example, the discussion of peptic ulcer occupies 10 short pages, and achalasia of the esophagus just one page. These are conditions which are discussed much more adequately in other volumes, and thus one would not be tempted to consult this particular reference for information on them.

The items of particular value in such a book as this are the general discussions of the problems of aging, both anatomical and social. These areas are also dealt with briefly, because so large a portion of the book has been devoted to descriptions of diseases. There are many fascinating quotations and vignettes in these general chapters, and it is a pity that these generic sections could not have been enlarged upon. Much of the space devoted to routine discussions of disease processes such as heart disease and prostatic disease could thus have been put to a better use.

This book would be of value to lay individuals who are studying the problems of the aged, and to the general practitioner, but it probably would be of little value to the specialist.—*Daniel A. Glomset,* M.D.

INTERNATIONAL CONGRESS OF PHYSICAL MEDICINE

The American Congress of Physical Medicine and Rehabilitation will serve as host to the Third International Congress of Physical Medicine in Washington, D. C., August 21-26. Thirty-three nations will be represented, and over 80 papers will be read.

Neuromuscular diseases and their treatment will be the subject of three half-day sessions. An all-day program on Tuesday, August 23, on arthritis will be presented by nine physiatrists, including four from Europe. Electromyography, currently prominent in physical medicine, will be the topic of two full sessions.

An all-day program on Thursday, August 25, will be devoted to neuromuscular problems and to internal medicine. Papers at the morning and afternoon sessions will cover objective measurements in cardiac patients, special rehabilitation services in cardiac and pulmonary disabilities, home evaluation for discharged disabled patients, and therapy while at home.

The closing sessions on Friday, August 26, will concern the design, use and adaptation of orthetic and prosthetic appliances for leg amputations, rehabilitation and functional bracing of the hand and special appliances for the disabled. Education, balneology, scoliosis, muscle, aftercare of trauma and cerebral palsy each will be the subject of a half-day program. A total of 21 papers on these topics will range from research on physical medicine in Russia to hydrotherapy for rehabilitation as practiced in Germany.

The meetings will take place at the Mayflower Hotel.

NATIONAL PROGRAM OF TEMPORAL-BONE BANKS

The Deafness Research Foundation is providing funds to the American Laryngological, Rhinological and Otological Society, Inc., of which Dr. John R. Lindsay, chairman of the Department of Otolaryngology at the University of Illinois, is president-elect, to begin a nation-wide appeal for temporal bones, but the objective of the resultant "bank" will be quite different from the objective of the now-familiar "eye banks." By securing the temporal bone areas incasing the middle-ear and inner-ear structures of persons who, in their lifetimes, suffered from impaired hearing and whose cases were carefully documented in medical records, Dr. Lindsay and his colleagues at the University of Illinois College of Medicine and elsewhere will have opportunities to examine them and determine some of the so-far unidentified causes of deafness.

Much standard data now available on practically every other organ of the body is lacking on the ear. As inner ears are studied and correlative information is gleaned from the patients' medical records, some hitherto obscure aspects of such conditions as Meniere's disease, otosclerosis, labyrinthitis and deafness due to other causes may be revealed, and the effects of various medical and surgical treatment methods can be evaluated.

Another important reason for acquiring the middle- and inner-ear structures is to implement training programs. They will be used throughout the country in training laboratory technicians in the handling and preparation of ear specimens, and in the training of otologists. Ear surgery is performed almost entirely with the operating microscope, and considerable practice is required before a man can manipulate instruments efficiently in the narrow confines of the middle ear, even with the help of magnification. That surgical practice must be performed upon human ear structures, and too few ears have been available—particularly ones presenting pathologies.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer

COMMISSIONER

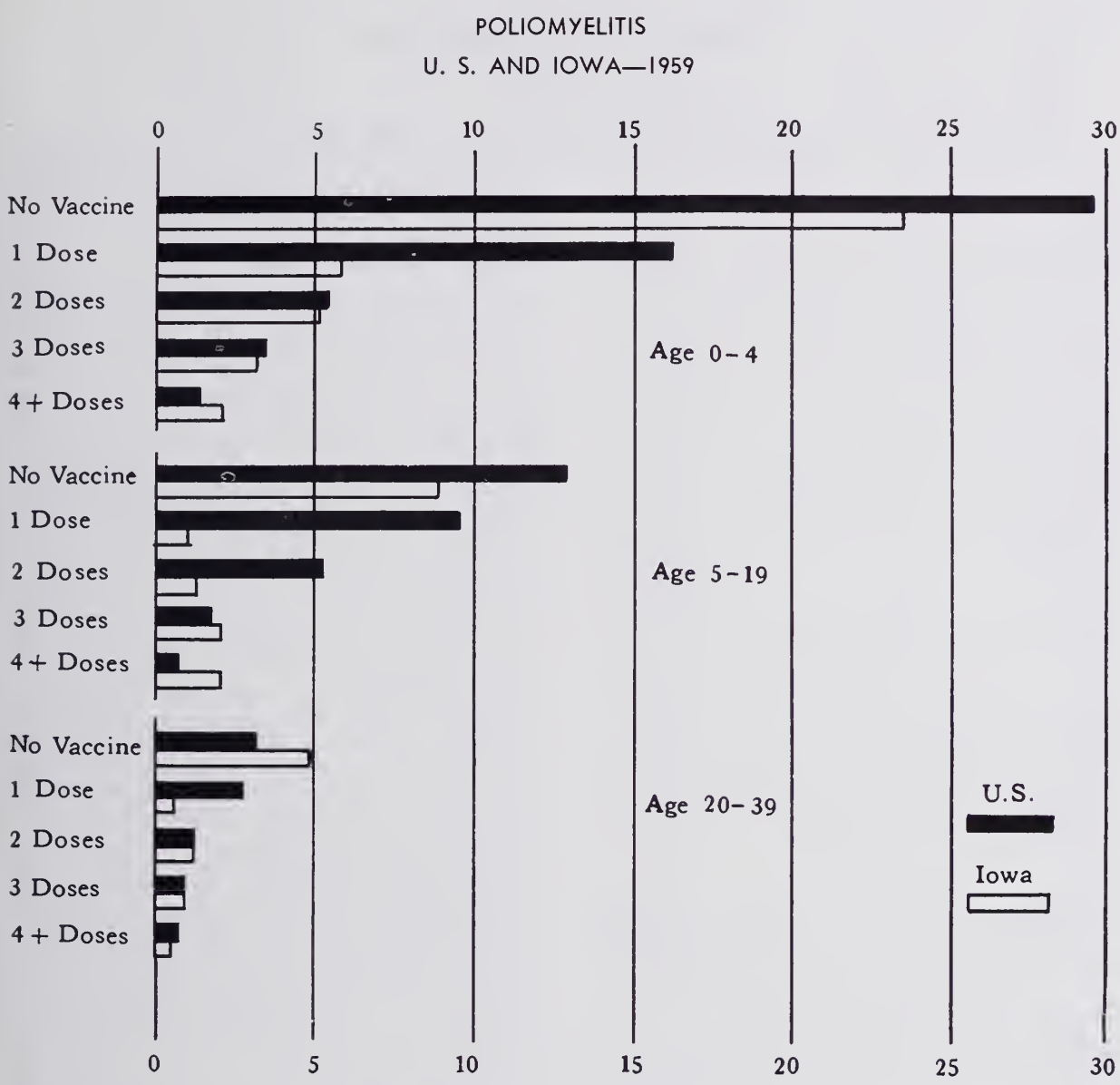
MORBIDITY REPORT FOR MONTH OF JUNE, 1960

Diseases	*June 1960*	*May 1960*	*June 1959*	*Most Cases Reported From These Counties*
Diphtheria	0	0	1	
Scarlet fever	159	206	102	Johnson, Polk
Typhoid fever	1	0	1	Scott
Smallpox	0	0	0	
Measles	282	388	659	Des Moines, Dubuque, Pottawattamie
Whooping cough	15	4	18	Dallas
Brucellosis	23	42	18	Scott
Chickenpox	423	268	336	Dubuque, Polk, Pottawattamie, Scott
Meningococcic meningitis	1	2	1	Warren
Mumps	645	452	225	Dubuque, Polk, Pottawattamie, Scott, Story
Poliomyelitis	4	0	43	Ida, Polk, Webster, Woodbury
Infectious hepatitis	16	28	5	Scott, Woodbury
Rabies in animals	15	20	10	Kossuth, Marshall
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	32	44	41	For the state
Syphilis	71	90	80	For the state
Gonorrhea	113	120	63	For the state
Histoplasmosis	0	1	0	
Food intoxication	0	0	0	
Meningitis (type unspecified)	2	1	2	Polk
Diphtheria carrier	0	1	0	
Aseptic meningitis	1	0	3	Polk
Salmonellosis	5	2	1	Polk
Tetanus	0	0	0	
Chancroid	1	0	0	Webster
Encephalitis (type unspecified)	2	0	2	Pottawattamie
H. influenzal meningitis	0	1	0	
Amebiasis	0	7	0	
Shigellosis	1	1	0	Hancock
Influenza	2	0	1	Polk

INCIDENCE OF POLIOMYELITIS IN IOWA AND IN THE U. S.

The accompanying chart compares paralytic poliomyelitis case rates for vaccinated and unvaccinated persons by age group in the state of Iowa with the comparable rates for the United States. A similarity of rates in the two areas is apparent even on casual inspection. Since some people may be interested in the figures from which the Iowa case rates were drawn, a tabulation of Iowa's 285 paralytic poliomyelitis cases for 1959 is also presented. This Iowa table contains a line for patients 40 and over, but for the purpose of keeping the chart entirely balanced, the figures for persons 40 and over were deleted from it. Figures in parentheses are case rates per 100,000 population.

Card-by-card examination of the 56 patients shown in the table to have had three or more injections of vaccine reveals a lack of poliomyelitis immunization meeting the recommendations in effect last year and still in effect at present. In other words, only 15 of the 56 persons who had had three or more injections had had them properly spaced, and had had the last injection within a year of the time of onset of illness. Persons who had had more than three injections, in most instances, had completed the original series of three injections in 1956 or 1957, and there had been too long an interval before the booster was given them, or the booster had been given during the incubation period of the patient's illness. One of them, for example, had completed the original series of three injections in 1957 and had the fourth injection, the booster, within two weeks of his illness. Two patients had had the third injection (the last of the basic series of three) two weeks before onset of illness. Another had had a third injection two days before the onset of illness, and another had had it just four days before falling ill.



Paralytic poliomyelitis case rates for vaccinated and unvaccinated persons, by age group, 1959 (preliminary to December 14), calculated from U. S. Public Health Service data. Iowa figures for calendar year 1959.

PARALYTIC POLIOMYELITIS—IOWA, 1959
285 CASES

	1 Inj.		*2 Inj.*		*3 Inj.*		*4 Inj.*		*No Vaccine*	
Age Group	NO.	RATE*	NO.	RATE*	NO.	RATE*	NO.	RATE*	NO.	RATE*
0- 4	17	(5.8)	15	(5.1)	9	(3.1)	6	(2.0)	67	(22.8)
5-19	6	(0.8)	9	(1.2)	16	(2.1)	16	(2.1)	66	(8.9)
20-39	3	(0.5)	8	(1.2)	6	(0.9)	3	(0.5)	32	(4.8)
40 and over	—		—		—		—		6	

* Rate per 100,000 population.

Enteric Virus Isolations

IOWA—1958 AND 1959

County	*Poliomyelitis* 1958	1959
Adams		1-I
Appanoose	1-I	
Audubon		1-III
Black Hawk	1-III	4-I
Boone		8-I
Buchanan	1-III	
Butler		1-I
Cass		3-I
Cerro Gordo		1-I
Clarke		1-I
Clinton		1-I
Dallas		5-I
Fayette	1-I	
Floyd	1-I, 1-III	1-I
Guthrie		3-I
Harrison		1-III
Humboldt		2-I
Jackson		2-III
Jasper	1-I	4-I
Johnson		1-I
Kossuth		1-I
Lee		1-I
Lucas		2-I
Madison		3-I
Mahaska		3-I
Marshall	1-I, 1-III	3-I
Monona		1-III
Montgomery		1-I
Muscatine		2-I
Page		1-I
Polk	3-I, 1-III	84-I
Pottawattamie		1-I, 2-III
Scott		7-I
Story		1-I
Union		1-I
Wapello	1-III	
Warren	1-I	
Washington	1-I	
Webster		8-I

County	*Coxsackie* 1958	1959
Fayette		1-A9
Humboldt	1-B5	
Polk	3-B2, 1-B5	3-B2
Pottawattamie		1-A9, 1-B2, 1-B3
Webster	1-B3	

County	*Echo* 1958	1959
Black Hawk	1-E9	1-E9
Polk	2-E9	2-E7
Pottawattamie		1-E17

During 1958 the following isolations were reported from the Pediatrics Virus Laboratory at Iowa City without county: 3 Polio Type I; 1 Polio Type III; 1 Coxsackie B4; 1 Coxsackie B5; 1 ECHO 4; 1 ECHO 5; 1 ECHO 8; 2 ECHO 9.

The preceding summary of enteric virus isolations from specimens submitted by Iowa physicians during 1958 and 1959 should be of interest to many of us who work with poliomyelitis and other illnesses having clinical manifestations similar enough to present difficulty in clinical diagnosis. It is definitely to the credit of Iowa physicians that of the 408 cases of reported poliomyelitis in Iowa in 1959, laboratory specimens for virus study were submitted on 260. As further indication of the quality of specimens submitted and the methods of preparation and mailing of the specimens, particularly by pathologists from about 20 of our larger hospitals, it is noteworthy that the examining laboratories were able to report 162 isolations for poliomyelitis Types I and III; seven isolations for Coxsackie viruses; and four isolations for ECHO viruses. The 162 positive isolations for poliomyelitis virus from specimens submitted from 260 patients represents 60.23 per cent positive isolations. This definitely indicates that specimens were received in the examining laboratories in good condition. This record is particularly remarkable since the great majority of specimens had to be sent to the USPHS Communicable Disease Center Regional Laboratories at Kansas City. The other two laboratories from which positive isolations were reported are the University of Nebraska College of Medicine Virus Laboratory, in Omaha, and Dr. Cramblett's Virus Laboratory, in the Department of Pediatrics at the S.U.I. College of Medicine. (Some specimens were submitted to the Jonas Salk Laboratory, in Pittsburgh, but the reports returned to us indicated that no virus isolations were made from them.) Specimens examined in the Virus Laboratory at Omaha were largely from Iowa patients either hospitalized in Omaha or under the care of Iowa physicians in areas adjacent to Omaha or Council Bluffs. The specimens reported upon by the Pediatrics Laboratory in Iowa City were from cases admitted to the University Hospitals.

Although the Iowa 1957 poliomyelitis virus isolations are not reported in this summary, it is to be noted that all of them were Type I poliomyelitis. In 1958, the seven Type III viruses isolated were from patients in seven counties in the eastern half of the state. Of the seven Type III isolations in 1959, five were in counties on the western border of the state. The proportions of Types I and III poliomyelitis virus, one to the other, found in Iowa are comparable to those in the United States as a whole. In other words, in the last two years, Type I has been the prevailing virus type nationally. Type III has been found less frequently, and Type II, not isolated in Iowa during the last three years, has been infrequently found.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

Another month, another meeting, another message! The meeting on which I can report this month was the master one—the National Convention of the AMA and its Auxiliary, in Miami Beach.

Iowa hid her corn, allowed only her ears and silk to show. The ears were alert and not too prominent. Occasionally, the silk was decorated with an orchid! Yours truly gasped loud and long on beholding an all-white orchid, and it was her major adornment the evening of the president's reception. (Thank-you notes are not good reading, so I shall wait until I see you in person.)

You may not believe it, but the best-looking and the best-listening delegates seemed to be those from Iowa. Dr. Nielsen blames my bifocals for statements like this, but Mrs. Kast, Mrs. Larimer, Mrs. Larsen and Mrs. Richmond agree with me. We were so well organized that you will hear from three of us in on-the-spot reports published here in the WOMAN'S AUXILIARY NEWS. Each delegate will cover one day's activities.

Every day overflowed with new ideas for useful service, new stories, inspiring lectures, top entertainment and unique decorating schemes. This entire page would be too small for adequate verbal coverage. If it were only possible for all of you to realize the tremendous opportunity these occasions afford, all of you would clamor to be the president, an officer or a delegate. Any way by which you could manage to get into the inner fold would be worth the effort.

MRS. R. F. NIELSEN
President

DELEGATES' REPORTS

The enticing Florida sunshine did its best to get the Iowa delegation to the 37th Annual Convention of the Woman's Auxiliary to the AMA to remain outside, but all four of the delegates proved their loyalty by recording a 100 per cent attendance at the meetings. The representatives of other states were loyal too, for 274 out of the 285 delegates answered roll call on Monday morning.

Mrs. Frank Gastineau, the national president, streamlined the entire convention, disposing of all routine business matters with dispatch. Recommendations from the Board of Directors that received favorable action at the convention were: formation of a Standing Committee on Rural Health; donation of $100 each to the Crusade for Freedom, the World Medical Association Loan Fund, the Student American Medical Association Loan Fund, and the Student American Medical Association Auxiliary for its anniversary tea; and donation of $5,000 to the American Medical Education Foundation in memory of Auxiliary members who had died during the past year.

Dr. Edward L. Bortz, an AMA past-president and a consultant to the Committee on Aging, gave an amusing, yet thought-provoking address entitled "The Evergreen Years." He presented and advised everyone to follow a "decalogue of health." It will be published in a later issue of the WOMAN'S AUXILIARY NEWS.

Mrs. Eugene Countiss, president of the Auxiliary to the Louisiana State Medical Society, conducted a beautiful candlelighting service in memory of the past year's deceased members.

After an informal luncheon and some time to enjoy the Florida sunshine, our delegates attended a tea at which Pfizer Laboratories and J. B. Roerig & Co. were hosts, and saw the Jordan-Marsh fashion show.

MRS. FRANK R. RICHMOND, JR.
Fort Madison

* * *

The state reports were given by regions, on Tuesday morning, with each state allotted two minutes only. The reports were impressive—all indicating very similar programs and all working toward one and the same goal. Differing points of view and differing emphases were reflected as the state representatives brought out points of special concern in their particular localities.

The morning speaker was Mr. John Bach, of the AMA Division of Communications. In an address entitled "Words at Work in Your Auxiliary," he recounted the importance of words in all kinds of medical communication, both from the standpoint of the physician and from that of his wife in the Auxiliary. He declared that the work which members of the Auxiliary can do with words in behalf of medicine is important to the medical profession, but what they say and how they say it carries a grave responsibility. A more detailed account of his remarks will appear in a later issue of the WOMEN'S AUXILIARY NEWS.

Dr. McKinnie L. Phelps, of Denver, vice-chairman of the AMA Council on Legislation, presented "The AMA Platform for Political Action." He complimented the Auxiliaries for their work and for their cooperation in this important field. He urged that we continue and indeed that we make a

greater effort to inform our own people, and said that each of us must be clear in her own mind about the high ideals of medicine. His key point was that we should help *all* people in our communities think accurately and clearly about public issues, and then put those thoughts into action.

The report of the AMEF chairman and the other reports entitled "Operation Home Preparedness," "A Doctor's Mental Health Begins at Home" and "Medicine as a Career" were all interesting, and I shall want to relay their contents to Iowa Auxiliary members during the coming months.

Tuesday's session closed with a water-safety demonstration at the Hotel Deauville swimming pool. Following the opening meeting of the AMA Tuesday evening, all attended the reception and ball honoring the president of the American Medical Association.

MRS. DONALD H. KAST
Des Moines

* * *

The usual business session occupied Wednesday morning, with election of officers and the installation of the new president of the national Auxiliary, Mrs. William Mackersie, of Detroit. In her address installing the new president, Mrs. Mason G. Lawson, a past-president, quoted Paul's letter to the Corinthians: "He who sows sparingly shall reap sparingly. He who sows bountifully shall reap bountifully." My mind was thoroughly occupied with the wisdom of these few words. She had much more to say, but preoccupation with this truth captured my thoughts so completely that I remember only one further admonition: "Two people exchange dollars—and nothing happens. Two people exchange ideas—and great things happen."

The Thursday morning program was given over entirely to health films with which Auxiliary members should be acquainted. Printed information on these audio-visual resources is available through the Auxiliary headquarters office.

The Thursday afternoon session opened with round table discussions to which the states had been assigned according to the sizes of their Auxiliaries. Following a discussion of 1960-1961 programs by the national chairman, there was an address by Dr. Ernest B. Howard, assistant executive vice-president of the AMA. He brought news from the AMA House of Delegates, gave the convention sites for the coming five years, discussed relations with allied health groups, talked about the possible group annuity program, said the AMA will discourage compulsory retirement at 65 and will try to create a climate for people to help themselves rather than rely on the government, and declared that the federal government should provide care only when the individual, the family, the community, the county and the state have failed.

Adjournment followed the announcement that the 1961 convention is to be held in New York.

MRS. R. N. LARIMER
Sioux City

BOARD MEETING HIGHLIGHTS

On June 28, at Clear Lake, 30 women demonstrated their "loyalty and devotion to the Woman's Auxiliary" by denying themselves the golfing, swimming, boating and all of the other types of fun that the resort affords, and by spending the day reviewing and planning Auxiliary courses of action.

For a while, we were concerned about the Black Hawk County representation. When those women finally arrived, they announced themselves as the "See Iowa First" girls. Yes, they had explored a new, lengthy route.

When I have told you that the meeting began at 9:30 a.m. and adjourned at 3:30 p.m., you won't want me to share with you all that transpired. Enthusiastic reports were given by all of the officers and committee chairmen present. Luncheon was served at the Lake Shore Hotel, and a fashion show was in progress there. The hospitality left nothing to be desired.

Perhaps the real news of the meeting was an acknowledgment of the futility of officers' trying to visit every organized Auxiliary in the state every year. Having recognized that fact, we are dividing the state into three sections, and will cover each section comprehensively once each three years. This will permit us to visit unorganized areas, too. Mrs. Nielsen and Mrs. Kilgore will start on a "crash" program in an effort to foil Old Man Winter. They will visit Auxiliaries in the eastern section of Iowa during the month of October—i.e., Districts I, VI, VII and VIII. In 1961-1962, the emphasis should be on Districts II, V, IX and X. Then in 1962-1963, the concentration will be on Districts III, IV and XI. This doesn't mean that visits will be made only in the designated area, but that there will be comprehensive coverage there. To guide the president and president-elect in the actual execution of this plan will be a committee composed of Mrs. N. W. Irving, Mrs. B. F. Kilgore and Mrs. Louis Goldberg.

Remember! Eastern Iowa will be in the game this year. Watch out!

MRS. W. W. SANDS
Des Moines

CITIZENS, BE STILL!

and listen to that STILL, SMALL VOICE WITHIN YOU.

Are there too many meetings, too many committees, too many places to go and be counted? Are days not long enough? Is there too much to do and no time to do it? Are you worried about your health, your family?—about business, about state and national politics, about the school situation, about our foreign policy, about Russia, Cuba and China?

Why do so many things worry you? Be still and listen to your own still, small voice. Could it be that you are worried because there is a guilt

that lies in you and in all of us? Are we guilty of not valuing the great heritage of our country? Have we tried with all our might to keep and preserve our greatness, our honesty, our kindness and fairness, or have we one and all shifted our responsibilities?

The time is late, but there is still a chance to start working for honest and far-sighted government.

It has been said that America is great because it is good, and that if America ceases to be good it will cease to be great. We must not only be good ourselves, but we must help elect good men in our cities, counties, state and nation. To this end, we must become informed, and must inform our friends and neighbors. It is up to each of us to see that only GOOD MEN are elected, now and throughout the future.

Vote with intelligence and with caring!

JANE KING
Legislative co-chairman

AMEF

A check for $170,230 to the American Medical Education Foundation was presented at a luncheon honoring national past presidents at the Miami meeting. For the first time, the "Ethel Gastineau Trophy" was awarded to the Woman's Auxiliary to the Tennessee Medical Association for outstanding efforts on behalf of the AMEF. This trophy was presented last fall to Mrs. Gastineau, immediate past president, who was the guest of the Iowa Auxiliary at their annual meeting in April while she was president of the National Auxiliary. The trophy was presented to Mrs. Gastineau for her continuing work with AMEF and established by her as a travelling trophy to be awarded annually. Iowa increased its contribution greatly the past year reaching its goal of $1.00 per member. With this continued interest in AMEF perhaps Iowa may qualify for the trophy this year.

SAFETY PROGRAM

In addition to automotive safety and home safety the Auxiliary has added a new safety program called "SWAT"—Safe Water Activities Training. A water safety demonstration by the Red Cross at the Miami meeting pointed up the importance of safe practices while swimming, boating and skin and scuba* diving. With the increased popularity of these sports every community has need for a safety program incorporating "SWAT." It is hoped each Auxiliary member will take an active part in setting up such a program. Information on this may be obtained from your Safety Chairman, Mrs. R. E. Hines, 3525 Witmer Parkway, Des Moines 10, or from our headquarters office in Des Moines.

MEET YOUR MEMBERS

Candidate No. 3
Polk's Progressive
Mrs. N. W. Irving

The name Irving has had great charm for me ever since the 1930's. This is another story but suffice it to say, it was the name of an English teacher of mine at Northwestern University. Hearing this name often mentioned in legislative groups and praised in Auxiliary, it was most natural to wish to know Florence Irving. I loved her from the start! My sympathy to those in Auxiliary who have not at least seen her. She is a real beauty queen.

Outside of Auxiliary, those who know her by her services are: P.T.A. members, Camp Fire Girls, P.E.O.'s, Cub Scouts, or members of her Church. Her devoted service and activity in these areas has brought her many loyal friends. We owe Platner, Colorado, a debt of gratitude for permitting her to migrate to Iowa.

Marcia, Linda and Noble,
Are her children three;
Sixteen, twelve, eleven,
Their ages all should be.

If you own a music box,
She would like it so
In her house to hear it,
No matter where you go.

Dancing, basketball, bridge, books,
She just likes them all.
A radiologist
Her sweetheart she does call.

IN MEMORIAM

Mrs. M. N. Voldeng of Independence, Iowa served as the first Auxiliary president of our state in 1929. News of her death reached the state organization and was received with sorrow. As a symbol of our love and affection, memorial gifts were sent to A.M.E.F. and the Health Education Loan Fund. We will cherish her memory in our hearts.

* The word means "self contained underwater breathing apparatus."

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. E. A. Larsen, 323 Oak Street, Centerville
President-Elect—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. H. C. Merillat, 116 Lincoln Place Drive, Des Moines 12

THE DOCTOR'S BUSINESS



Investment Funds

HOWARD D. BAKER

WATERLOO

Investment funds continue to play an increasingly important role in today's highly complex and selective market. There are many types of funds, varying as regards their management and investment policies. We feel that today the "growth stock" or "common stock" fund offers the greatest investment opportunity for the professional man. One of these offers most because it is almost completely invested in common growth stocks. In this type of fund, you are paying load and management fees for performance, rather than for management of an investment in bonds or preferred stocks. If you adhere to the principle of balancing your portfolio between fixed and variable investments, there is little logic in your investing in a fund that will "balance" even further.

We feel that your best choice is a fund invested 90 to 99 per cent in common stocks. Only by doing this can you realize the full growth and income potential of the investment fund. There are many arguments for and against both open- and closed-end funds; however, we feel that the open-end fund offers more stability over the long run, since the value of its shares is not so noticeably affected by day-to-day market fluctuations. It is also a fact that very few closed-end funds have been able to meet the performance standards set by the leaders in the open-end class.

In the tabulation that follows, we give performance data on the leaders of the open-end funds for 1959, 1958, the five years that ended on 12/31/59 and the ten years that ended on 12/31/59.

Since the performances of these funds vary from one period to another, it is impossible to rank them. They are all excellent funds and worthy of consideration. However, it must be emphasized that the figures illustrate relative past performances, and don't necessarily indicate future results.

PERFORMANCE RECORDS OF SELECTED OPEN-END FUNDS

Fund	*Yr. 1959*	*Yr. 1958*	*5 Yrs. to 12/31/59*	*10 Yrs. to 12/31/59*
	%	%	%	%
Aberdeen Fund	+19	+39	+113	+336
Chemical Fund	+23	+39	+121	+399
Founders Mutual Fund	+15	+46	+104	+353
Growth Industry Shares	+21	+48	+115	+381
Incorporated Investors	+13	+46	+ 77	+351
Institutional Growth Fund	+12	+36	+ 63	+397
Investment Trust of Boston	+10	+41	+ 72	+353
Keystone S-3	+13	+46	+ 93	+422
Keystone S-4	+29	+80	+154	+613
Mass. Investors Growth	+16	+49	+116	+421
Mass. Investors Trust	+ 9	+43	+ 84	+333
National Investors	+18	+48	+120	+404
National Securities Growth	+27	+44	+109	+487
Television Electronics	+23	+53	+109	+438
United Accumulative Fund	+15	+38	+ 82	+323

These performance figures assume the reinvestment of all capital gains distributions and the payment of ordinary income dividends in cash.

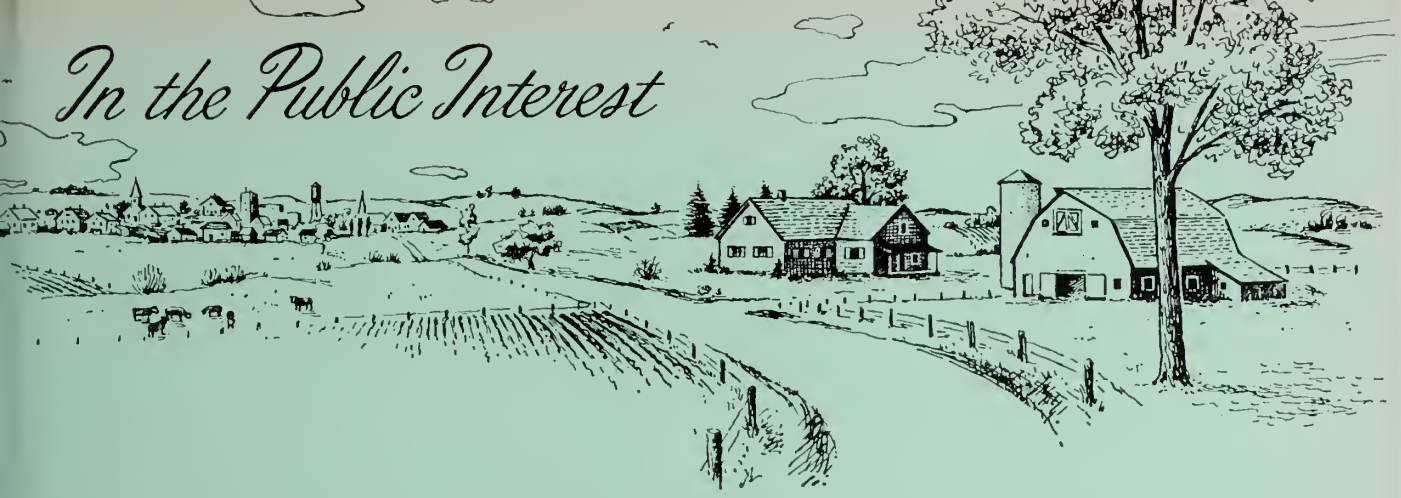
PERFORMANCE RECORDS OF SELECTED CLOSED-END FUNDS

Fund	*Yr. 1959*	*Yr. 1958*	*5 Yrs. to 12/31/59*	*10 Yrs. to 12/31/59*
	%	%	%	%
Boston Pers. Prop. Trust	+12	+40	+ 95	+353
Carriers & General	+ 8	+34	+ 82	+321
Central Securities	+37	+52	+130	+460
Consolidated Inv. Trust	+ 9	+40	+ 87	+406
Lehman Corporation	+ 8	+41	+ 78	+318
National Aviation	+16	+37	+ 58	+516
Petroleum Corporation	− 8	+33	+ 50	+322
Tri-Continental	+ 8	+33	+ 85	+346

This performance tabulation assumes the reinvestment of all income and capital gains distributions.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

In the Public Interest



We Must Enable the Elderly to Remain Self-Reliant

On being told that one of our friends or acquaintances has reached the retirement age which has been set by his employer and that he is about to quit work, each of us is regretful, and on his final day the party that is given in his honor is a sad occasion indeed. We tell one another that he "looks good for at least another five or 10 years of full-time service" or that he "still has a lot to offer for the good of his fellow men," and we mean what we say. But the assurances we offer to the guest of honor that now he can begin really to live are completely hollow. Retirement, we are fully aware, marks an end rather than a beginning for most people, and except for the rare individual who has prepared for it by gradually strengthening his absorption in non-occupational pursuits, it marks the terminus of all striving and, indeed, of the will to live. Subsequently, none of us is surprised to learn either that our friend has aged calamitously, or even that he has suddenly died.

Observers, in such circumstances, are not inclined to think that the employer was gifted with either good luck or great foresight in having laid the man off in just the nick of time. On the contrary, they have no hesitation in blaming the ex-employee's fate on the compulsory retirement rule, and though they don't find fault with the specific employer in question, since compulsory retirement is almost ubiquitous, they are certain that their friend might have gone on living happily and productively if only he had been permitted to continue at his accustomed tasks.

However fervently a man may have longed for greater leisure, or however vocally he may have resented being awakened by his alarm clock on five or six mornings each week, throughout 20, 30 or 40 years, the sudden cessation of his responsibilities and the final realization that his cherished objectives are unattainable all too frequently render him hopeless and helpless. To some extent, working has become a habit that it is painful to break. Some of the retired are obsessed by the fear that inflation and other forces beyond their control may prevent their savings and their other resources from lasting out the remainders of their lives. But most importantly, the retired worker is distressed by the belief that he is no longer needed—that he has become a burden upon his children and his other close relatives.

THE ELDERLY CAN MAKE VALUABLE CONTRIBUTIONS TO OUR ECONOMY

It would be foolhardy, of course, to deny that there is such a thing as the aging process, or to deny that there are some men and women whom it renders incapable of further participation in the work of the world. But it is no less unreasonable to assume that each and every worker has outlived his usefulness precisely on reaching his sixty-fifth birthday. Beginning sometime in their late twenties—as the won-and-lost records of professional athletes clearly demonstrate—men and women begin to lose some of their physical efficiency, and there comes a time for each of them when a lack of vigor and of dexterity handicaps them more or less completely. But the rates of decline are generally less rapid than they used to be, and they vary quite significantly from one person to another. Certainly in America, the land of individual freedom and of equality of opportunity, each person should be given a chance to continue working to the utmost of his capabilities.

As compared with previous grandparent generations, the senior citizens of today are an extremely healthy and able group, in part because of the comparatively easy lives they have led, and in part because of the advances that have taken place in medical science. The farmers among them, for example, have had the aid of electrical or gasoline-powered machinery in doing the tasks at which their fathers literally wore themselves out. Farmers' wives have had similar advantages—ones that their mothers lived just too early to enjoy. Industrial workers and their wives have been similarly fortunate. No wonder that most of them look remarkably strong and alert at retirement age!

Though most any of these people can recite a

rather lengthy catalog of ailments that bother them from time to time, there are fewer invalids among them than most people are inclined to suppose. In this connection, it is very important for us to note that there is a considerable distinction in meaning between the terms *chronic illness* and *disabling illness*. Diabetes, to cite a rather extreme instance, is a chronic ailment, for no one ever succeeds in shaking it off. But it is not disabling at all, if properly managed. People of all ages continue their usual pursuits and may even enjoy life despite such chronic conditions as curvature of the spine, stubborn dermatologies of allergic or other origin, asthma and even stomach ulcer in some instances. Likewise, there are varying degrees of disability. Rheumatism and even arthritis often fail to prevent men and women from working regularly and efficiently, particularly in this age of universal mechanization and, indeed, of growing automation. Though there are as yet few jobs that involve no more than sitting at a panel and pushing assorted buttons, the tasks are even rarer, nowadays, that require men and women possessed of great strength and inexhaustible stamina.

There are no diseases that are peculiar to the elderly, but there are some advances in medicine that have been especially helpful in prolonging their lives and their potential usefulness. Medicines for the reduction of high blood pressure are now numerous and efficient, and drugs have been discovered that keep blood from clotting in arteries and veins, thus helping to prevent the recurrence of strokes. The prompt ambulation of elderly accident victims after the setting of their broken bones, together with new technics for bringing a fast stop to their frequently complicating cases of pneumonia, can now save their lives and shorten their periods of convalescence. In addition, of course, the aging have had the advantage of all the medical developments that have benefited adults in general.

COMPULSORY RETIREMENT LONG UNNECESSARY

How did America ever happen to institute the compulsory-retirement rule? To some extent, it was because the elderly weren't so healthy as they are now, and in part it was because jobs used to make rather formidable demands upon the physical resources of the people who held them. The principal reason for shelving the old folks, however, was that there simply weren't enough jobs to go around.

During the Depression of the early 1930's—the days of the NRA, the PWA and the WPA—a great many steps were taken to make employment available only to young men with families to support.

At the start of World War II, all of the rules restricting the employment of young bachelors and married women disappeared. Firms and governmental agencies were no longer criticized for hiring as many members of a family as they could recruit. But here the abrogations stopped. The compulsory retirement age remained fixed, OASI recipients still were prevented from accepting full-time gainful employment, and the prejudice against engaging employees appreciably beyond 40 years of age remained virtually unshaken.

A "RETAIN THE EXPERIENCED WORKER" CRUSADE

The preserving or restoring of self-confidence, self-sufficiency and self-respect to our senior citizens does not require the enactment of laws.* Rather, it calls for a crusade not unlike the familiar one that uses the slogan "Hire the Handicapped."

Employers must be made to see that they haven't fully discharged their responsibility by providing a pension system to supplement prospective OASI benefits, and then presenting each of their employees an engraved watch and a pink slip on his sixty-fifth birthday. They must be convinced that they can profit from retaining their older workers full time, if they are maximally capable and wish to stay, and that they can profit likewise from giving part-time employment or piece work to those of them who want to continue but no longer can put in 40-hour weeks. It shouldn't be necessary for us to attempt assigning precise dollar values to such intangibles as long experience, proved loyalty and the wisdom of age. Without our doing so, managements should be quick to recognize the public-relations potential of practices bespeaking their firms' respect for their veteran employees and the lifetimes of service they have rendered.

TRAINING FOR EVENTUAL RETIREMENT

Both our secondary schools and our adult education programs should be redesigned so as to cultivate young people's intellectual interests more assiduously, and to teach skills in either handicrafts or fine arts that will occupy the spare time and energies of the learners through the active years of their lives and into their days of partial or complete retirement. So provided, it is possible that many people may come actually to yearn for the day when they can quit earning a living and can devote themselves to their other interests!

Self-reliance has been inculcated in nearly all Americans, and if some of our elderly people have shown an inclination toward dependency upon government, it may well be that we have shoved them in that direction.

Let's now make a start at restoring independence and self-reliance to them!

*Yet it probably does necessitate repeal of the limit placed upon the earnings of OASI recipients in the Social Security System.

FUTURE PHYSICIANS

Is there a Future Physicians' Club in your high school or community? In various areas of the United States, groups of this sort are being organized, and they promise to be very important to the future of medicine, in presenting to high school students the interesting possibilities offered to them in medical careers. Formerly, the role of physician was "tops" in its attraction to capable high school graduates. Its magnet seemed to consist of (1) the prestige that the local physician had in the community, (2) the challenge that the college of medicine offered by posing the toughest of all college courses, (3) the satisfactory financial return that a medical career provided, and (4) the glamor that enveloped a scientific field in which the body of knowledge was rapidly growing and in which continuous study was required of the participants.

Now, the profession of medicine has lost many of those attractions, or at least must share them with several other occupations. Explorations are being made beyond the earth's atmosphere, and the roles of the physicist and related types of engineers have achieved equal or greater prominence. Some of the imaginative concepts of the "Buck Rogers" cartoons of past years are, in a sense, becoming reality, and it is therefore only natural that a majority of honor students graduating from our high schools have an interest in outer space, rather than in the field of medicine.

We doctors have sat idly by. Previously, we weren't called upon to take any active steps in introducing the profession of medicine to high school students, but as a profession, we should recognize and meet the challenge that space science is posing for us. We can easily do it. All that is required is the initiative of some individuals in promoting a plan to acquaint high school students with the attractions of careers in medicine. Future Physicians' Clubs are the technic that we can use.

Undoubtedly most high school students think rather too much of the hardships of medical practice, such as a doctor's having to provide his professional services whenever they are called for—24 hours a day. If these young people could be acquainted with the diversified fields of activity that medicine offers and could be reminded of the marked scientific advances that have virtually transformed medicine within just the past 20 or 25 years, perhaps many more of them would respond to the challenge that it continues to present.

Our high schools have various similar clubs, such as the Future Nurses, the Chemistry Club, the Physics Club and many others. Students join these organizations so they can learn as much as possible about phases of science in which they are interested—more than they can learn from the courses in the regular high school curriculum. Why not start a Future Physicians' Club? Certainly the school administrators would welcome whatever interest and informative counseling we physicians might offer. Let's wake up to the potential that such an organization would have for acquainting talented high school students with the vast opportunities in the profession of medicine!

Dr. Everett H. Wood, of Albuquerque, New Mexico, has received many inquiries about the Future Doctors' Club which his local medical society organized in cooperation with the city's Kiwanis Club. It is Albuquerque's answer to the decline in the number of top-caliber applicants for admission to medical schools. The physicians there began by having a meeting every two weeks with interested senior students, and then later expanded the programs to take in all students interested in biological sciences. The young people were introduced to the profession of medicine through on-the-spot demonstrations of the various aspects of medical practice, through a study of the workings and functions of a modern hospital, and through talks by doctors and movies showing research work being done.

Hats off to the Union County Medical Society, here in Iowa, which early this year recognized the value of such an organization, and started one on its own initiative! Actually, this sort of project can best be handled on the local community level.

The Essex County Medical Society, in New Jersey, is convinced of the merits of such organizations, and is currently starting clubs for future doctors in all of its local high schools.

Why not get behind this idea and help organize Future Physicians' Clubs in the schools of your community?

PRESCHOOL CHILDREN SHOULD NOT BE TOLD THAT THEY HAVE BEEN ADOPTED

Youngsters between the ages of three and six are too young to be told that they are adopted, Dr. Marshall D. Schechter, of Beverly Hills, declares in the July issue of AMA ARCHIVES OF GENERAL PSYCHIATRY. "It would appear," he says, "that children who have been adopted have potentially a more fertile soil for development of neurotic and psychotic states."

Dr. Schechter terms the period from three to six years "the age of Oedipal conflicts" when the child forms a strong attachment to the parent of the opposite sex, while becoming aggressive and envious toward the parent of the same sex. The knowledge of his adoptive status, so often coming at the time of the Oedipal conflict, can prolong and actually prevent the resolution of this particular area of personality development. Moreover, the confidence the child has built up in his parents, particularly in his mother, is weakened and destroyed. Certainly learning and object relations can be profoundly disturbed.

He also said that "the anxiety these children manifest often refers to the possibility of their returning to their original parents or, having been given up once for undetermined reasons, they may be given up again, also for undetermined, fantasied reasons."

NINTH WESTERN CARDIAC CONFERENCE

At the Ninth Western Cardiac Conference, to be held in Phipps Auditorium, atop City Park in Denver, August 15-20, Dr. Eugene Braunwald, of Bethesda, will speak on "Intercardiac Shunts"; Dr. Chandler Brooks, of New York, on "Cardiac Failure"; Dr. John Campbell, of Indianapolis, on "Radiology"; Dr. George Clowes, of Cleveland, on "Cardiac Surgery"; Dr. Michael DeBakey, of Houston, on "Vascular Surgery"; Dr. William Foley, of New York, on "Vascular Disease"; Dr. Louis Gillespie, of Bethesda, on "Hypertension"; Dr. Robert Helm, of Cincinnati, on "Electrocardiography"; Dr. Louis Katz, of Chicago, on "Atherosclerosis"; and Dr. Lawrence Lamb, of San Antonio, on "Space Medicine." The American Academy of General Practice has approved the sessions for Category I credit.

For further information, write to the Colorado Heart Association, 1636 Logan Street, Denver 3. *East* Colfax motels are convenient to the meeting hall.

Mark these dates on your calendar now!
September 18, 19, 20, 1960

ANNUAL MEETING AND SCIENTIFIC ASSEMBLY

Iowa Chapter
American Academy of General Practice
Savery Hotel, Des Moines

TUBERCULOSIS IN THE ELDERLY

"By a vigorous search for pulmonary tuberculosis and by appropriate therapy, the unfavorable mortality rates and increased relapse rates for elderly tuberculosis patients may be altered or even reversed," Dr. Harry B. Greenberg, of the Tulane University Medical School, has suggested in the July issue of the JOURNAL OF THE AMERICAN GERIATRICS SOCIETY. But as things are now, more new cases of pulmonary tuberculosis are being found in persons past 50 than in any other age group.

Active tuberculosis in the aged often is obscured by other symptoms such as those of chronic bronchitis or cardiovascular disease, and often it is discovered only when a younger member of the family contracts the disease and a search is made for the source of infection.

Resistance to tuberculosis is diminished in old age, and therefore the mortality rate is significantly higher than in other groups. But still, the disease runs a milder, less explosive course, and the principal thing that the physician must do, in the interests both of his elderly patients and their younger relatives, is to raise his own index of suspicion.

MEDICAL SEMINAR CRUISE

The Duke University Medical School is sponsoring a postgraduate medical seminar cruise to the West Indies aboard the new *S.S. Kungsholm,* Sweden's largest transatlantic liner and cruise ship. The luxury vessel will sail from New York City on November 9, will visit the Virgin Islands and San Juan, Puerto Rico, and will return to New York City on November 18.

Shipboard lectures on various subjects in medicine, pediatrics and surgery will be given by members of the Duke University Medical School faculty. The instructional program will provide 20 hours' credit toward the postgraduate requirements of the American Academy of General Practice. Although designed primarily for the generalist, the program should be of value and of interest to specialists as well. Informal panel discussions, clinicopathological conferences and formal presentations will be included.

For further information, address W. M. Nicholson, M.D., assistant dean for postgraduate medical education, Duke University Medical Center, Durham, North Carolina.

Your Federal Budget: Facts v. Illusions

MAURICE H. STANS, *Director*
U. S. Bureau of the Budget

I would be the first to say that the President and the Congress have a great responsibility to work for a sound Federal budget, but I will also say—and very forcefully—that the President and the Congress can't possibly cope with all the pressures for more spending without the public's outspoken interest and support. Thrift, along with most of the other worthwhile characteristics that have made America great, begins at home.

It's your job.

I'm here today to give you some plain talk, as businessmen, as taxpayers, and as thoughtful Americans, on the hard facts that go to the very roots of the issue of fiscal responsibility in our times. I want you to listen to them and match them up against the tough challenges that face us in the 1960's, and against the glib argument that government isn't making the necessary effort to keep up with the demands of a dynamic economy.

FIRST, MY CONCLUSIONS

To begin, I'm going to transpose the usual order and tell you my own conclusions first rather than later. Then I propose to develop the facts and circumstances which bear them out, and in the process show you where they leave us now, and what we have to do to set things straight.

These are my conclusions:

First—in the last several decades we have adopted a national state of mind that will inflict us with almost permanent fiscal problems;

Second—these continuing fiscal problems stem from two main national delusions, which I shall come to shortly;

Third—as a result of these delusions, which have been nurtured by pressure groups, we have sacrificed much of the flexibility in fiscal matters that we need in order to cope with vital responsibilities; and

Fourth—only a new sense of national self-discipline can restore that flexibility.

Now, the first of these great delusions is our fascination with the miracle theory of public spending, otherwise known as the "crash" approach to national objectives. This viewpoint tells us that money will buy anything. All we have to do is oversimplify great problems into neat solutions which require only tremendous spending to yield quick and sure results—and the more we spend, the quicker the results. Now, these are illusions. We have been through "crash" programs often enough to know that they are generally wasteful, inadequately planned, and invite costly overlapping and duplication of efforts. Money is only one of the factors that go into the achievement of our national objectives. It comes down to this: add up the illusions and you find that you are dealing with a national state of mind that regards unrestrained, compulsive spending as the twentieth century panacea.

The second great delusion is that when we turn to the Federal Government to solve local problems we are only spending the other fellow's money. It seems so much easier to go to the Federal Government to fix our streets, build our schools, provide our airports, finance our hospitals, and even provide our library services, than it is to take our chances with the city council or the state legislature. Somehow it just doesn't seem to hurt as much.

Together, these two delusions—that money will solve anything, and more money will solve it faster, and that it's the other fellow's money we're spending—have almost destroyed our opportunities for orderly fiscal planning. The urge to spend is epidemic, and it has obscured the constructive role of budgeting as a deliberate way to tie together our capabilities with our aims. At the same time, our readiness to borrow—to mortgage the future—has created continuing obligations that destroy our flexibility to reflect changing national values and to meet new challenges.

As things now stand, the budget is leashed by high costs of national defense, interest charges, and an array of untouchable benefit and subsidy expenditures which reflect more of yesterday's priorities than today's—and with inadequate concern for the difficult circumstances that face us in the world.

It is those conditions that I want next to mention. As I see it, there are four present major circumstances that must be taken into account in charting our future course.

First, we must appraise the Soviet threat! For the moment, the purposes of Soviet policy seem to be served by a parading of militarism. The probability is that they still choose the economic battlefield, renewing Mr. Khrushchev's challenge to the free enterprise system. In effect, he has pledged all the energies of the Soviet system toward making us a second-class economic power. He boasts that he will prove that capitalism and our free democracy are on the way out, destined

Mr. Stans delivered this address at the 49th Annual Dinner Meeting of the New Jersey State Chamber of Commerce, in Newark, on June 20, 1960.

for burial under the weight of Soviet economic vitality. That attack is aimed straight at the strength and stability of the American dollar in the world.

Next, our continuing unfavorable balance of payments, which ran about $4 billion in 1959, has elements of danger. Whether or not those dangers develop depends on how we maintain the world's confidence in us—in our ability to manage our fiscal affairs, and to maintain a strong dollar. We have become the world's banker, with large balances of short-term credits. If we run a poor bank—if we don't manage our finances tightly—we can lose that confidence, and the results can be serious to our gold supply and to our money and our national vitality.

Third, to date, compensatory fiscal policy has not worked as it was supposed to work. Whenever we have a downspin, we accelerate Government spending and borrowing to pull ourselves out; but when equilibrium is restored, we seem to lack the fortitude to curtail spending and generate a surplus to pay the debts we have incurred to tide us through the emergency. If we continue along this line our national debt is bound to go up and up.

And fourth, the shadow of inflation is always stalking us. The fact that we have held it off so well the last few years is not a reason for relaxing, because the danger is still with us. United Nations figures show that 29 out of 68 free countries—almost half—have had price increases of 50 per cent or more in the last 10 years. I don't need to tell you what this has meant in terms of a loss of values of savings, insurance, pensions—in suffering and loss of opportunity.

And let's not buy another delusion—that it can't happen here.

These four circumstances mean that we need to indulge in some serious soul-searching. As American citizens, do we now recognize two aspects of national security—military and economic? Are we strong and secure against economic attack, as we are militarily? Can we run the risks of playing Russian roulette with inflation? Can we continue to demand more of Government than we are willing to pay for in taxes? Can we allow ourselves any longer the delusion that if money comes from Washington someone else provides it? Can we fight with full strength under a tax burden that discourages initiative, and a vast public debt which grows and grows?

FISCAL TRENDS

Getting down to cases, let me give you some examples of the fiscal trend in the Federal Government alone. In the decade from fiscal 1950 to fiscal 1960—

—Total Federal taxes and receipts rose from $36.5 billion to $78.6 billion—an increase of 115 per cent;

—Expenditures for agricultural programs went from $2.8 billion to $5.1 billion—a rise of 85 per cent;

—Expenditures for natural resources grew from $1.2 billion to $1.8 billion—a rise of 50 per cent;

—Expenditures for labor and welfare went from $1.9 billion to $4.4 billion—an increase of 130 per cent;

—Expenditures for major national security rose from $13 billion in 1950 to $45.6 billion in 1960—a growth of 250 per cent;

—Expenditures for interest on the public debt increased from $5.7 billion to $9.3 billion—an increase of about 60 per cent.

Now, here is a statistical point I want to make from these figures: Let's project this same trend into the next decade and see what we get—a Federal budget of $160 billion in 1970! Impossible? Yet is that any more fantastic to imagine than the increase we have already had—from $3 billion in 1930 to $9 billion in 1940, to $40 billion in 1950, to almost $80 billion in 1960?

Now I *hope* that this trend will not carry us to $160-billion budgets within the coming ten years, but I can tell you that we are certainly headed on a straight course for $100- or $120-billion budgets—or more—in a few years unless we change our ways.

THE CRITICS V. THE FACTS

I ask you to realize that when you look only at the budget for one fiscal year at a time, you see merely the visible part of the iceberg; the dangerous part is below the surface. The brutal truth is that we have made our job unnecessarily difficult—and we have already laid heavy burdens on our economic future.

I can demonstrate this to you by citing three shocking facts that every thoughtful citizen should be aware of:

Fact number one is that our present national debt of about $290 billion is far from all we owe for the past. This is just the interest-bearing debt. If one is really to understand what we owe, he has to add in some other things. For example, the benefits which we have voted to veterans and their dependents will cost $300 billion in the years ahead. On top of that, unfinanced government liabilities for military and civil service retirement already come to nearly $60 billion more.

And along with this, the Federal Government is piling up C.O.D.'s for future redemption at an astounding pace. Our commitments for highway improvements, for public housing, for civil public works, and for merchant shipping and other subsidies, run into the tens of billions. In fact, when we put these commitments together with the huge unspent balances of appropriations in the defense program, the total comes out to nearly $100 billion of C.O.D.'s!

Now the $290 billion of public debt, plus over $350 billion of future obligations for past services,

plus nearly $100 billion of C.O.D.'s, add to the almost unbelievable total of nearly $750 billion—and that is what I keep referring to as the Federal Government's mortgage on America's future, on ourselves and on our children, beyond the regular annual costs of defense, welfare, and commerce. I hope it shocks you as it shocked me when I began to dig into the figures. While I believe we can meet these commitments over the years, given a favorable economic tailwind, I certainly think they are storm signals that we ought to observe before we take ourselves into deeper and rougher water.

Fact number two is this: even if this session of the Congress doesn't add any new programs or increases to the President's budget, the level of federal spending is going to go up. The reason is that there are built-in increases in existing programs which are now producing a continuing upward push on expenditures. The catalog of built-in increases covers such programs as outer space, civil aviation, public works, merchant shipping, urban renewal, science education, medical research, public assistance, loans to underdeveloped countries, and veterans' pensions. The farm program may become even more costly as time goes on, unless we find a solution that helps the farmer and frees him from controls at the same time.

For 1961 alone, these built-in increases come to over $2 billion. That's why this budget is up over 1960. And looking ahead to 1962, there are already built-in increases of more than a billion dollars more. Of course, there are few built-in decreases —sadly, since Government programs, once started, develop their own immunity to revision or curtailment. A year ago the President in his Budget Message nominated 18 programs as being ripe for revision in order to reduce future expenditures. Only three received attention by the Congress, and those with the net result of *increasing* future expenditures by about $9 billion, rather than decreasing them.

Fact number three is that the pressure for additional spending is becoming more intense and harder to deal with. In part, this is a reflection of the conditions in a growing economy—population increases, urbanization, the thrust of technology. And yet we have to face the fact that our budget is already taut to the point of overstrain with programs and services already on the books.

A table in the CONGRESSIONAL RECORD showed that in the last session alone, 20 major spending bills in the Senate along with another 20 in the House, for new programs, priced out at roughly $300 billion over an average period of five years. While there is some duplication among them, if these and other bills were passed as their sponsors want them, they would add $50 to $60 billion a year to our present spending—while on the other hand there are bills to reduce taxes by $5 to $10 billion a year.

This is the bleak situation we shall do well to ponder when people ridicule $80 billion budgets as austere and reactionary, and when we are asked to believe that we can have more spending and tax cuts and prosperity for everyone, all in the same breath.

A BLEAK LOOK AT THE FUTURE

Now, to look ahead, I would like to try out some easy arithmetic on you.

Federal spending today is about 16 per cent of the gross national product. Assuming normal economic growth, we can reasonably foresee a GNP of $750 billion in 1970. If we keep the index of Federal taxes right where it is now, at 16 per cent, this would produce a Federal revenue level for 1970 of $120 billion—an increase of about $40 billion over the present level of budget receipts!

What do we plan to do with $40 billion?

Does our best national interest lie in placidly following Parkinson's second law—and let expenditures rise to meet that income? Should we exercise restraint in spending, and use some of the $40 billion for debt reduction? Or should we waive a large part of it back to the taxpayers in tax reduction, so that it can be spent in the area of private choice? Or should we let the decision go by default, and make the journey into the sixties without guideposts, without priorities, without plans?

The answer to this should be clear.

The time has come for us as a nation to make these decisions—to choose a course. We can't continue to drift while the spenders reach out for every cent of that $40 billion—and more—and push us toward national insolvency.

And that course must be the course of fiscal commonsense, of responsibility, of self-reliance and restraint, of self-discipline—because that is the only course that leads to economic strength and security and to free world leadership.

I submit that in government finances there is no acceptable alternative to conservatism. Any other choice means speculation. In plain words, that means gambling with our future as a nation. Conservatism still leaves ample room to be dynamic, to take up new ideas, to move ahead as we can afford to do so.

SUMMING UP

I think it is plain that in Communism's aims we have a resolute opponent abroad. But here in our own midst we have enemies, too, and I call them the Four Horsemen of Economic Destruction: compulsive spending, cancerous taxation, government by credit card, and inflation:

—Compulsive spending, which has helped multiply the Federal budget by 25 in just 30 years;

—Cancerous taxation, that erodes initiative;

—Government by credit card, which piles up unending accumulations of debt;

—And the final destroyer, inflation, which if allowed to ride unchecked would wipe out the values of savings, pensions, and insurance.

These enemies, if we don't control them, can destroy our national vigor much easier than it would succumb to Soviet attack.

WHAT'S TO BE DONE?

The task we face is to define the orbit of government, to rethink our priorities for public spending, to seek and achieve progress without sacrificing the standards which spell solvency and stability in our governmental business. These are the building materials for good government and an enduring future.

To my way of thinking, our priorities should be three:

First, to provide for a strong national defense, with the fervent hope that this necessity will be temporary and rapidly decreasing; and we have that!

Next, to work for a strong economy and a sound currency, both of which are essential to healthy growth and the maintenance of our position in the world. This means balanced budgets, a continuing fight against inflation, a realization that no benefits can be provided from Washington that are not paid for sooner or later directly in taxes or indirectly through inflation.

And lastly, to work for the most effective use of our resources for domestic purposes, to put the nation's interests ahead of selfish interests, to end the old and advance the new, to recognize the competition among purposes and keep them in proportion, to build on partnership between Government and the private economy in seeking our goals.

Let's remember one lesson from history: economic soundness may not guarantee national greatness, but no nation can hope for greatness without it.

Iowa-Methodist Internal Medicine Symposium

A new look at several familiar areas of internal medicine will be taken during a "Symposium on Internal Medicine" to be held at the Des Moines Art Center, Forty-seventh Street and Grand Avenue, Des Moines, on September 16 and 17. The sponsors are the Section on Internal Medicine of Iowa-Methodist Hospital, the Iowa Heart Association and Polk County Heart Council, and the Division of Gerontology, Heart and Chronic Diseases of the State Department of Health.

Friday, September 16

9:30 a.m. COFFEE

10:10 "New Knowledge of the Metabolism of Body Fat"—Richard E. Peterson, M.D.

10:45 "Body Build and Blood Pressure—Report of a Study"—Richard Gubner, M.D., clinical associate professor of medicine, Medical College of the State of New York, and director of the Diagnostic Services Division, Equitable Life Assurance Society of the United States

11:30 "Significance of Body Build and Blood Pressure Studies to the Actuary"—Dr. Gubner

11:50 "Significance of Actuarial Studies to the Clinician"—Harry Weinberg, M.D., Davenport

12:10 p.m. DISCUSSION: OBESITY AHD HIGH BLOOD PRESSURE

1:00 LUNCH

2:15 "Development of Hypertrophy Patterns in the Electrocardiogram"—Daniel A. Brody, M.D., professor of medicine, University of Tennessee

2:45 "Life Stress and Cardiovascular Disease"—James F. Hammersten, M.D., associate professor of medicine, University of Oklahoma

3:30 "Recent Clinical and Laboratory Observations in the Field of Lipid Metabolism"—Laurance W. Kinsell, M.D., director of the Institute for Metabolic Research, Highland-Alameda County Hospital, Oakland

4:10 DISCUSSION: ELECTROCARDIOGRAPHY; STRESS, ENDOCRINES AND VASCULAR DISEASE

6:30 DINNER MEETING OF POLK COUNTY MEDICAL SOCIETY, Savery Hotel "Diet, Lipid Metabolism and Atherosclerosis"—Dr. Kinsell

Saturday, September 17

(Morning Session at Iowa-Methodist Hospital)

10:00 a.m. GROUP CLINICS: Insurance; Electrocardiography; Congenital Heart Disease; Clinical Problems in Cardiovascular Disease and Metabolic Disease

11:45 "Practical Clinical Phonocardiography"—Dr. Brody

12:30 p.m. LUNCH

(Afternoon Session at Des Moines Art Center)

1:45 "Determinants of Cardiac Output"—John W. Eckstein, M.D.

2:05 "Myocardial Metabolic Derangements in Congestive Heart Failure"—William Huckabee, M.D.

2:50 "Renal Factors in Congestive Heart Failure"—Dr. Hammersten

3:05 "Review of Therapy for Cardiac Failure" L. E. January, M.D.

3:35 DISCUSSION: CONGESTIVE HEART FAILURE

Scientific Articles

The Visualization of the Vascular System

HILLIER L. BAKER, JR., M.D.

ROCHESTER, MINNESOTA

ROENTGENOGRAPHIC visualization of components of the vascular tree by means of radiopaque media is not a recent development. It was first accomplished by Haschek and Lindenthal[1] in an amputated arm, only three months after Roentgen's discovery of x rays in 1895. Since that time, numerous investigators employing various technics and substances have pursued the subject and have succeeded in demonstrating smaller and smaller vessels. These studies have progressed both in the laboratory, to delineate anatomic relationships in health and disease, and in the hospital ward, to clarify the clinical assessment of, and the therapeutic approach to, various pathologic states found in patients.

It is the clinical use of angiography that is the subject of this paper.

I believe it is safe to state that, at present, there is not a single vessel in the human body which could not be demonstrated roentgenographically, should the need arise. This need may occur either because of advances in surgical or medical therapeutic technics which permit attack of disease processes previously considered unassailable, or because of the discovery of new diseases whose existence can be most accurately demonstrated by angiographic means. Therefore, we should bear in mind that investigations into the minutiae of the vascular system which are thought to be of only academic interest today could produce some of our primary diagnostic tools in the future, as our therapeutic capabilities permit approaches to smaller and smaller structures.

Although contemplation of the future stimulates the imagination, it is proper to return to the present and consider the problems daily presented by patients in terms of what can be done to alleviate their symptoms. I do not propose to enumerate the many surgical and roentgenologic technics by means of which vessels are made radiopaque and are recorded on a roentgenogram. I should like, instead, to discuss some pathologic conditions for which angiography is indicated and is often vital in diagnosis and management. We all shall undoubtedly see patients with at least one of these conditions during this year.

OCCLUSIVE VASCULAR DISEASES

In the past several years, the study of the pathologic anatomy of arterial disease in the living patient by means of angiography has dispelled previous notions that atheromatous involvement of the vascular system was always diffuse. It has been found, on the contrary, that atherosclerosis is often uneven in its distribution and that occlusive processes may be limited to relatively short arterial segments. This concept is of great practical importance from the therapeutic standpoint, for the patient with localized segmental occlusive disease can be benefited most by surgical corrective procedures. Which patient should be selected to receive these benefits will depend on the evaluation of symptoms and the degree of disability, and on the demonstration of the extent and location of the lesion by means of angiography.

The abdominal aorta and its major branches are commonly affected by chronic occlusive processes. The presence of this condition is usually manifested by claudication, which is precipitated by exertion and relieved promptly by cessation of exertion. Such a disorder may limit a patient's general activities and, at times, may affect his occupation, but these limitations vary considerably with the person. In judging the degree of disability, one must take into account the severity of the pa-

Dr. Baker, a member of the staff in the Section of Roentgenology at the Mayo Clinic and Mayo Foundation, presented this as the Arthur Erskine Memorial Lecture at the Annual Meeting of the Iowa State Medical Society, in Des Moines, in April, 1960.

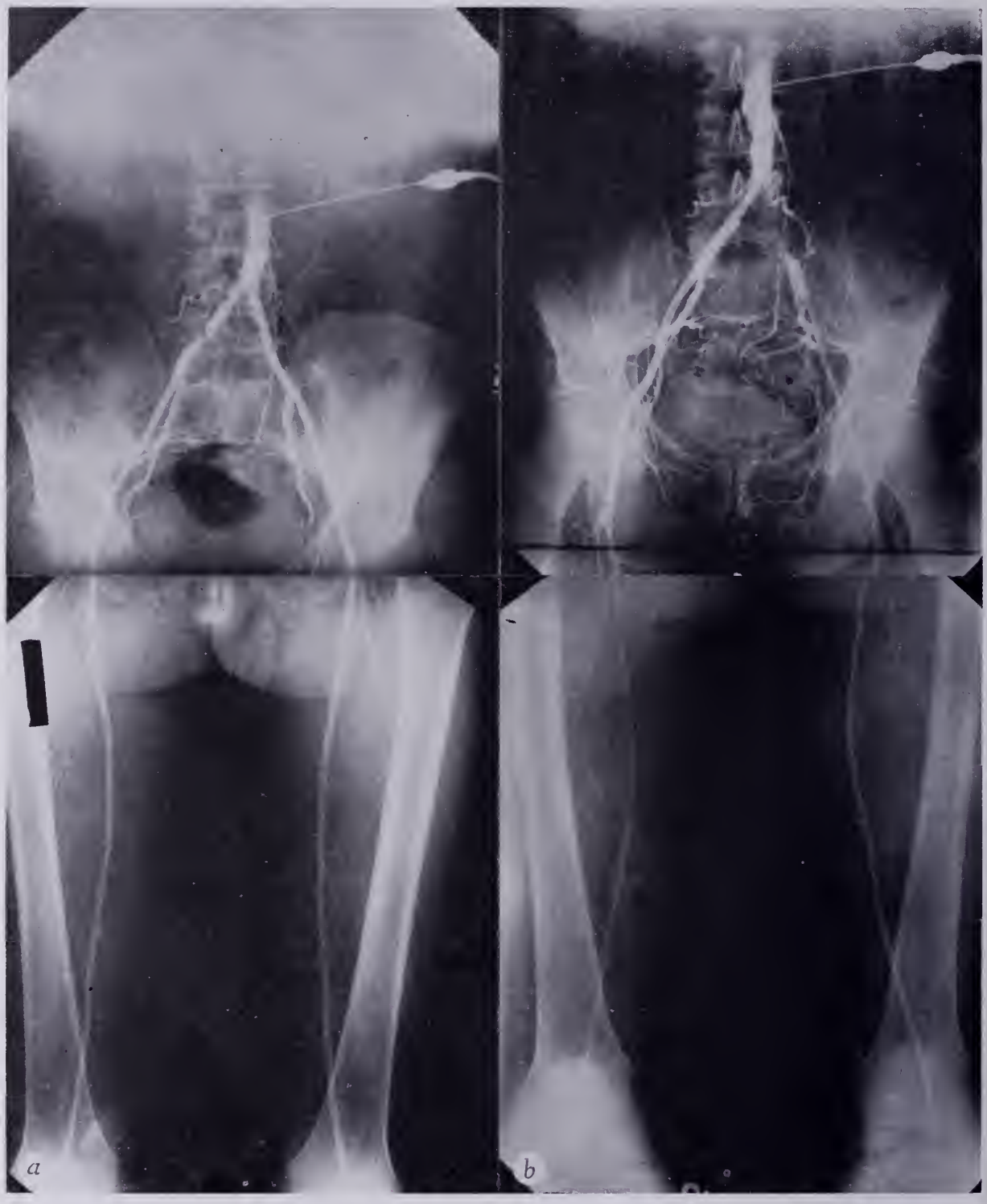


Figure 1. *a*. Partial occlusion of the right common iliac artery. Moderate atheromatosis of the lower aorta and iliac vessels with minimal changes distally. Ideal surgical candidate. *b*. Segmental obstruction of left common iliac artery. Only slight atheromatous change in femoral artery. Surgery led to relief of claudication in left hip and thigh of five years' duration. (Reprinted from Kincaid, O. W.: Translumbar aortography. SOUTH. M.J., 51:455-464, Apr., 1958.)

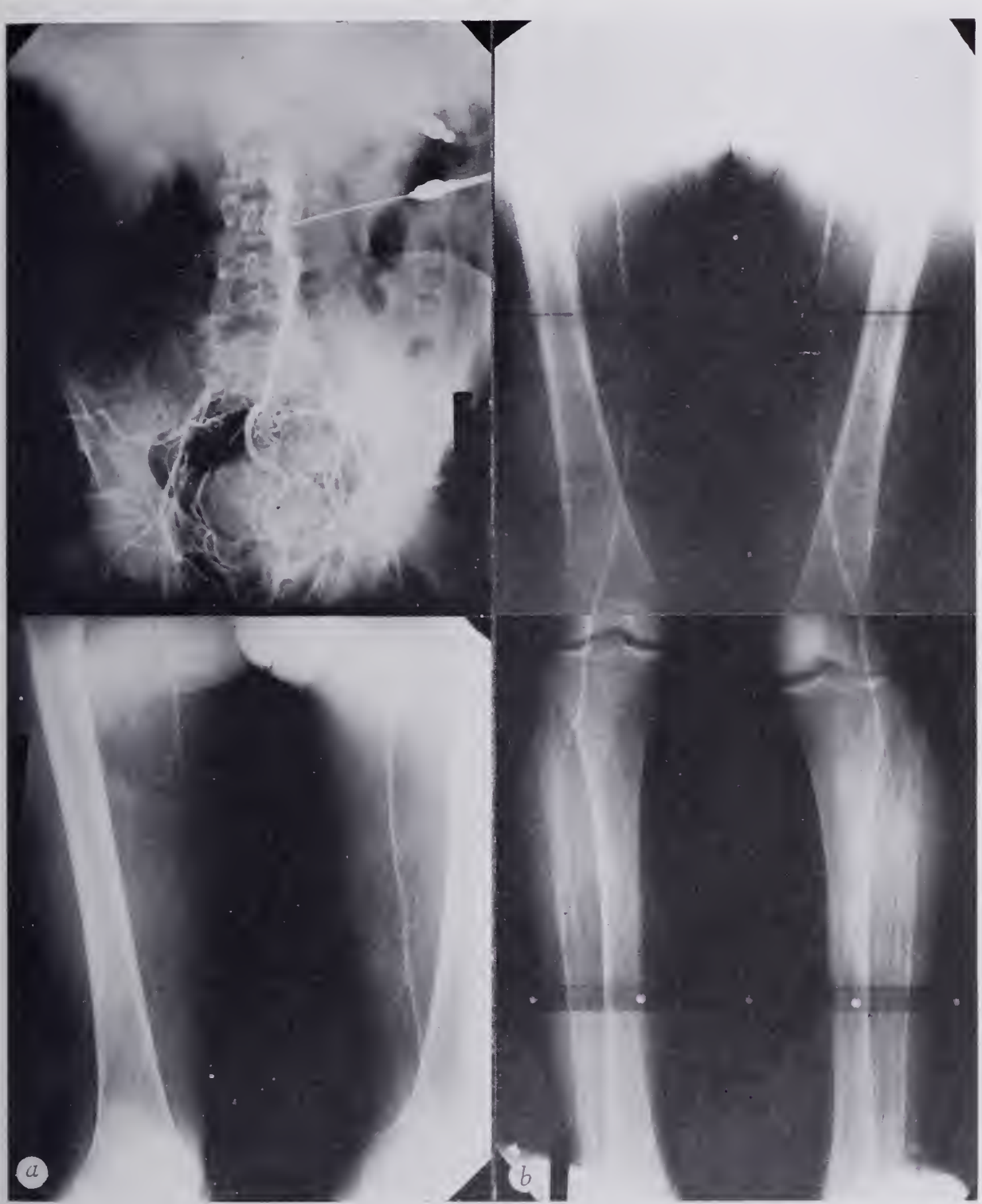


Figure 2. *a.* Generalized atheromatosis with occlusion of terminal aorta and right superficial femoral artery. Claudication in the right hip and thigh, and bilateral nocturnal leg cramps of six months' duration. A questionably operable lesion because of diffuse disease. (Reprinted from Kincaid, O. W.: Translumbar aortography. SOUTH. M.J., 51:455-464, Apr., 1958.) *b.* Segmental occlusion of both superficial femoral arteries with extensive collateral circulation is well shown. Claudication in both calves of 10 years' duration. Questionably operable lesions because of diffuse involvement. Bilateral femoral-popliteal bypass grafts alleviated symptoms. The right graft thrombosed after three months.

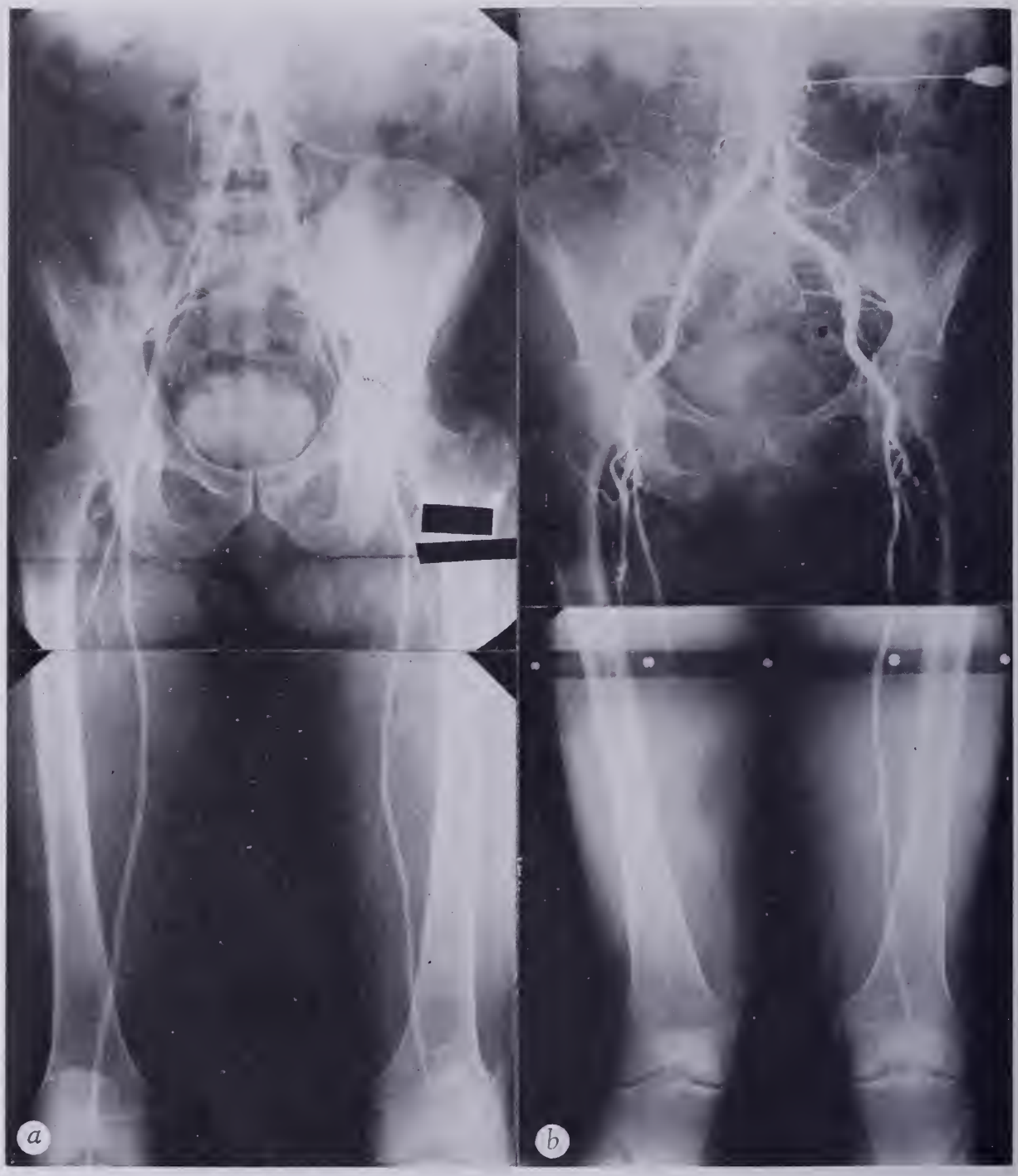


Figure 3. *a.* Segmental occlusion of left popliteal artery. Note extensive collateral circulation around knee and absence of arteriosclerosis in other vessels. This lesion was operable, but the patient refused surgery. (Reprinted from Kincaid, O. W.: Translumbar aortography. SOUTH. M.J., 51:455-464, Apr., 1958.) *b.* Diffuse arteriosclerosis obliterans. Note occlusion of right internal iliac and superficial femoral arteries. Lesions inoperable because of their multiplicity. Patient died two months later of coronary thrombosis.

tient's complaint in relation to his activities. If a person depends upon the use of his legs in his occupation, his disability assumes economic importance, and his need for therapy becomes obvious.

The location of the claudication suggests the site of the occlusive process. Aorto-iliac occlusion causes claudication in the lower part of the lumbar region, in the buttocks, in the hips, in the thighs

and occasionally in the calves, whereas occlusion of the femoral artery may cause claudication in the calves but no higher. In general, the presence of signs of ischemia indicates an extensive and diffuse arterial occlusive process for which surgical therapy is less likely to be successful. Angiography is indicated when it is necessary to evaluate the disease process more completely prior to surgical intervention. It should not be used in patients with widespread and severe involvement that is clinically obvious. When it is done, angiographic examination should be as complete as possible, so that both the aorta and the peripheral vessels are depicted. Abdominal aortography by the slow-injection, large-film technic described by Kincaid[2] will accomplish this in most cases. The aortograms illustrating this paper demonstrate some of the features already discussed (Figures 1-4).

Stenosing lesions also may involve the subclavian, vertebral and carotid arteries in the superior mediastinum and neck. They betray their presence by the production of the syndromes associated with insufficiency of the basilar and carotid arterial systems. These syndromes were described by Millikan and Siekert[3, 4] and consist of recurring "stroke-like" episodes from which the patient recovers. They are of grave portent, and should stimulate further diagnostic investigation so that anticoagulant or surgical therapy, or both, may be instituted before irreversible cerebral damage occurs.

Absence or diminution of the carotid and subclavian pulsations in the neck is often detectable in these patients, and it should be sought. Auscultation over these vessels to detect bruits, and the study of the retinal and brachial arterial pressures on both sides may also aid in the discovery of stenotic lesions. Eventually, the exact sites and size of the lesions must be demonstrated so that the surgeon may proceed with certainty. Injections of contrast medium into both subclavian arteries by a recently described technic,[5] together with an injection into the left common carotid artery, will show all of the vessels in question. Care should be taken to make the intracranial vessels visible as well, so that if diagnosis is difficult, other possibilities, such as brain tumor, vascular anomaly or aneurysm, may be considered. My colleagues and I have discovered several such intracranial lesions in patients who had symptoms resembling those of cerebrovascular insufficiency. The types of lesions observed are shown well in Figures 5-7.

ANEURYSMS

Most aneurysms found in man, whether congenital, arteriosclerotic, syphilitic or traumatic in origin, may be diagnosed by means of careful physical examination or ordinary roentgenograms with-



Figure 4. *a.* Complete occlusion of the aorta at the orifice of the inferior mesenteric artery. Bilateral femoral angiograms demonstrated patency of the leg vessels. An operable lesion, but the patient refused surgery. *b.* Same case as in 4*a*. Aortogram, two years later, reveals that aortic occlusion is just below the renal arteries. The lesion is now inoperable because the surgeon lacks space to effect an anastomosis in this region.

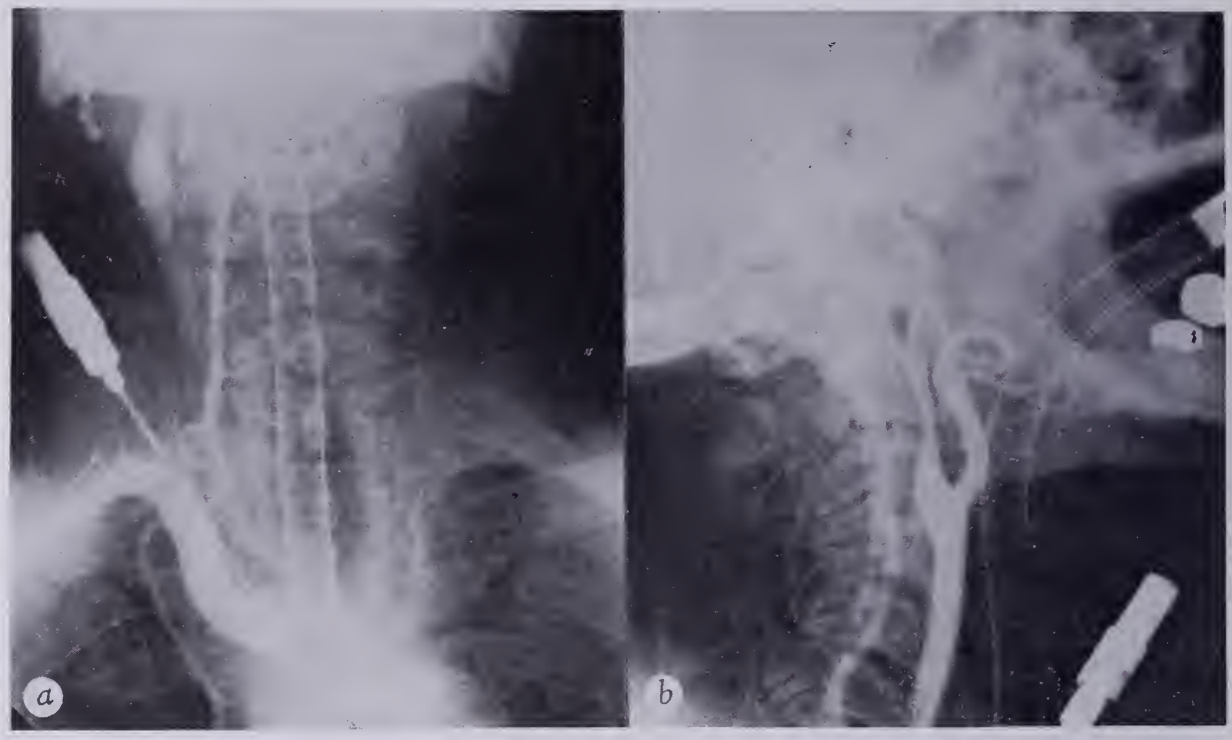


Figure 5. *a.* **High-grade stenosis of right vertebral artery, with suggestion of narrowing at origin of internal carotid artery. The patient has had several episodes of right carotid insufficiency in past years.** *b.* **Same case as in 5*a*. Lateral view conclusively demonstrates carotid narrowing. The vessels were normal intracranially. Endarterectomy of the carotid relieved symptoms.**

out recourse to angiography. A number of these lesions, however, because of their small size or inaccessibility may not be found until they are made radiopaque by contrast medium. Occasionally even the largest may be studied profitably in this manner as one plans the proper surgical approach to their treatment.

The aorta is by far the most common site of aneurysmal dilatation. In the past, the most common etiologic factor was syphilis, but as that disease has been controlled and as the average age of the population has increased, arteriosclerotic aneurysms have become the most numerous. The great majority of aortic aneurysms found today may be assumed to be of arteriosclerotic origin.

The discovery of an aneurysm of the aorta should not be regarded lightly, for more than 80 per cent of patients with such lesions die within five years, if untreated; if symptoms are present, most patients will die within a year of the time they were first noted. The most prominent symptom is diffuse pain, possibly intermittent, either in the thorax or in the abdomen. A palpable mass is sometimes present. If the aneurysm ruptures, shock occurs.

Aneurysms that cannot be diagnosed by palpation or by visualization of their calcified walls in ordinary roentgenograms are usually unsuspected until they produce symptoms. Aortography, then, may be the only means of establishing the diagnosis, and it should be employed freely. It should be remembered that the actual size of the aneurysm is not always apparent on the aortogram because the lumen contains a variable amount of



Figure 6. Marked atheromatosis causing narrowing at origin of left internal carotid artery. The patient had a right hemiplegia of three weeks' duration and was unimproved after surgery.

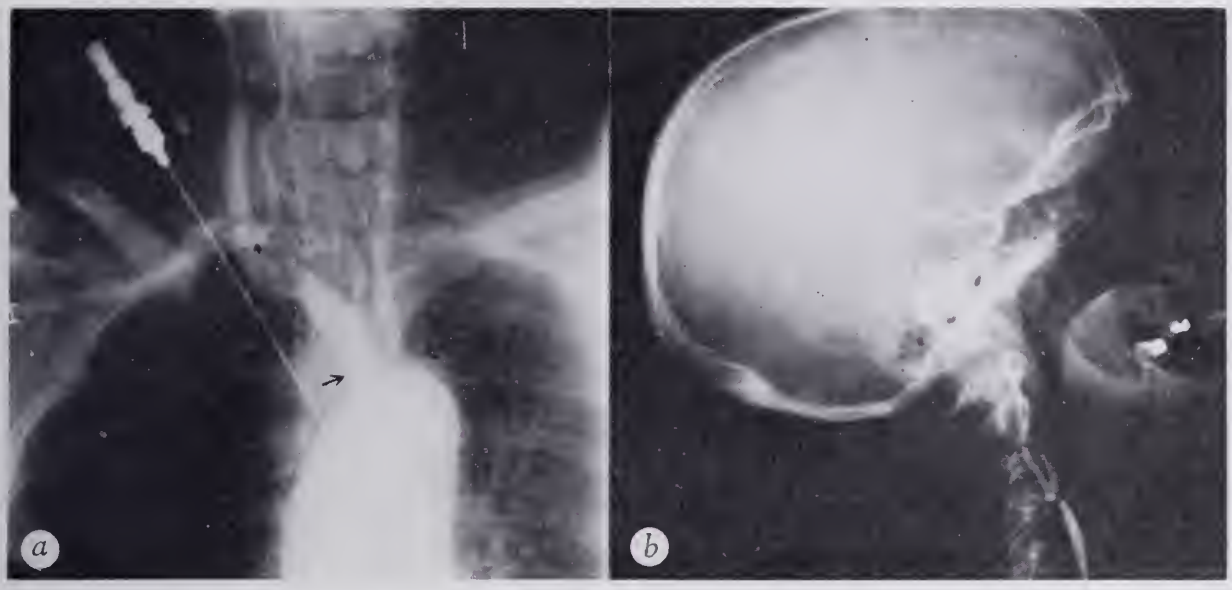


Figure 7. *a.* Thoracic aortogram demonstrates stenosis of right innominate, vertebral and subclavian arteries. The left subclavian is occluded (arrows). Intermittent carotid insufficiency and absent radial pulse on the left for two years. *b.* Same case as in 7*a*. Injection of left common carotid reveals marked occlusive process at the bifurcation. Aorto-subclavian bypass graft and carotid endarterectomy on left relieved patient's symptoms.

clotted blood. The portion of lumen visible on the aortogram may be little or no wider than the lumen of a normal aorta. However, the vessel's irregularity and tortuosity, and the fact that the mass formed by the aneurysm is more or less apparent, make it unlikely that the diagnosis will be missed (Figure 8).



Figure 8. Large aneurysm of abdominal aorta. Visible lumen, although tortuous and irregular, not much wider than that of a normal aorta. Soft-tissue mass with calcium in its periphery shows extent of the aneurysm and the thrombus within it.

Aneurysms of the abdominal branches of the aorta, although rare, are more common than has been believed. The splenic, hepatic and renal arteries are involved most frequently, but any vessel may be affected. Symptoms are nonspecific, but seem somewhat related to the site of the lesion. Vague abdominal pain is by far the most frequent complaint. Severe gastrointestinal bleeding may accompany hepatic or mesenteric arterial aneurysms, and hypertension may accompany those of the renal artery. All are prone to rupture, and for this reason alone, their diagnosis is important. Surgical removal prior to rupture involves only the risk of the surgical procedure itself; if rupture occurs, the mortality rate approaches 100 per cent.

In many instances the diagnosis may be suggested by incidental observation of calcific deposits in the wall of the aneurysm in roentgenograms of the abdomen or spinal column. This is especially true of splenic and hepatic arterial aneurysms, which frequently calcify. Aneurysms of the renal arteries calcify less often, and the discovery of recently occurring hypertension may be the only clue to their presence. Aortography is a sure method for arriving at the diagnosis of any of these lesions (Figures 9 and 10).

ARTERIOVENOUS MALFORMATIONS

Arteriovenous malformations may occur anywhere in the body. They most often cause symp-

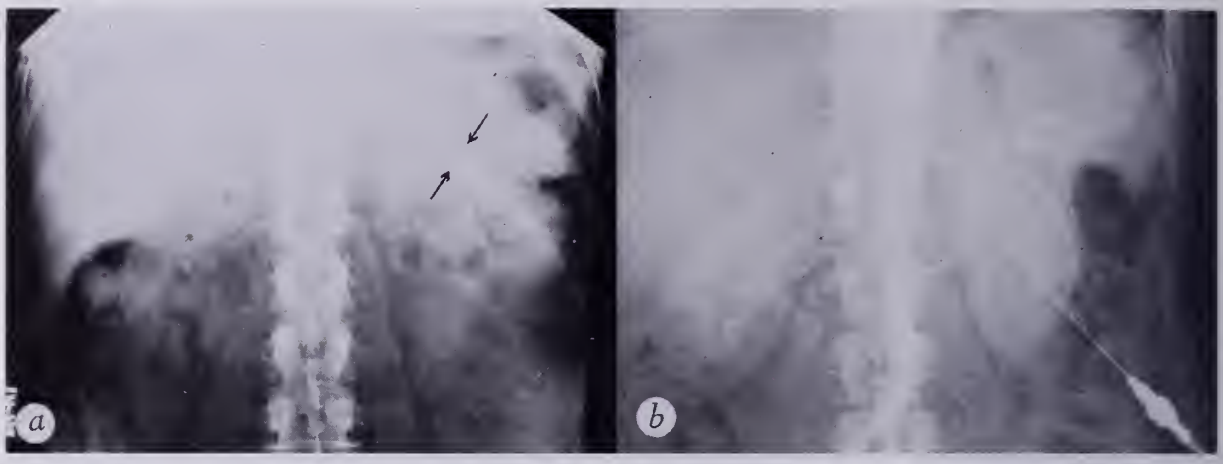


Figure 9. *a.* Roentgenogram of the abdomen. Rounded shadow of calcification in the left upper quadrant suggests aneurysm of splenic artery. *b.* Same case as in 9*a*. Aneurysm is well outlined by aortography.

toms when they arise in the brain and in abdominal organs. Many of these lesions are of congenital origin, such as those found in the head and lung. Most of those found in the abdominal and pelvic organs, however, result from trauma, such as a penetrating wound or surgical manipulation. In the uterus and adnexa, which are frequent sites of involvement, birth trauma plays a prominent causative role.

The symptoms and signs produced by arteriovenous malformations may be general, such as ascites, dyspnea, clubbing of the fingers, polycythemia and cardiomegaly, or they may be more specific, depending on the site of the lesion. Thus, intracranial involvement often leads to subarachnoid bleeding, epilepsy and focal neurologic signs, and menorrhagia is a frequent complaint when the pelvic organs are affected. The one finding common to all locations is an audible or palpable bruit. If such a bruit is found, angiography should be considered, not only to establish the diagnosis beyond doubt, but also as a basis for planning the therapeutic approach (Figure 11).

RENAL DISEASE

Disease processes involving the kidneys were among the first pathologic entities extensively studied by angiographic means. Initially this method was used in the differentiation of renal cysts and neoplasms. These lesions display quite different vascular patterns, cysts being completely avascular and tumors showing increased vascularity (the so-called tumor staining). As experience widened, it was noted that differentiation was

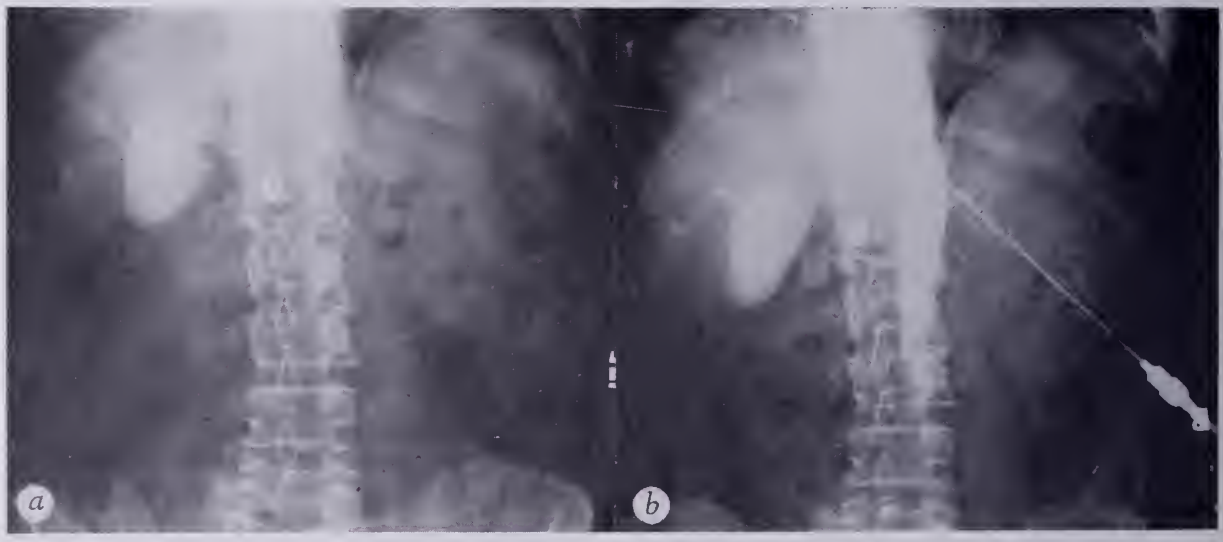


Figure 10. *a.* Curvilinear calcific shadow near the hilus of the right kidney. Aneurysm (?). *b.* Same case as in 10*a*. Good view of renal arterial aneurysm by aortography.

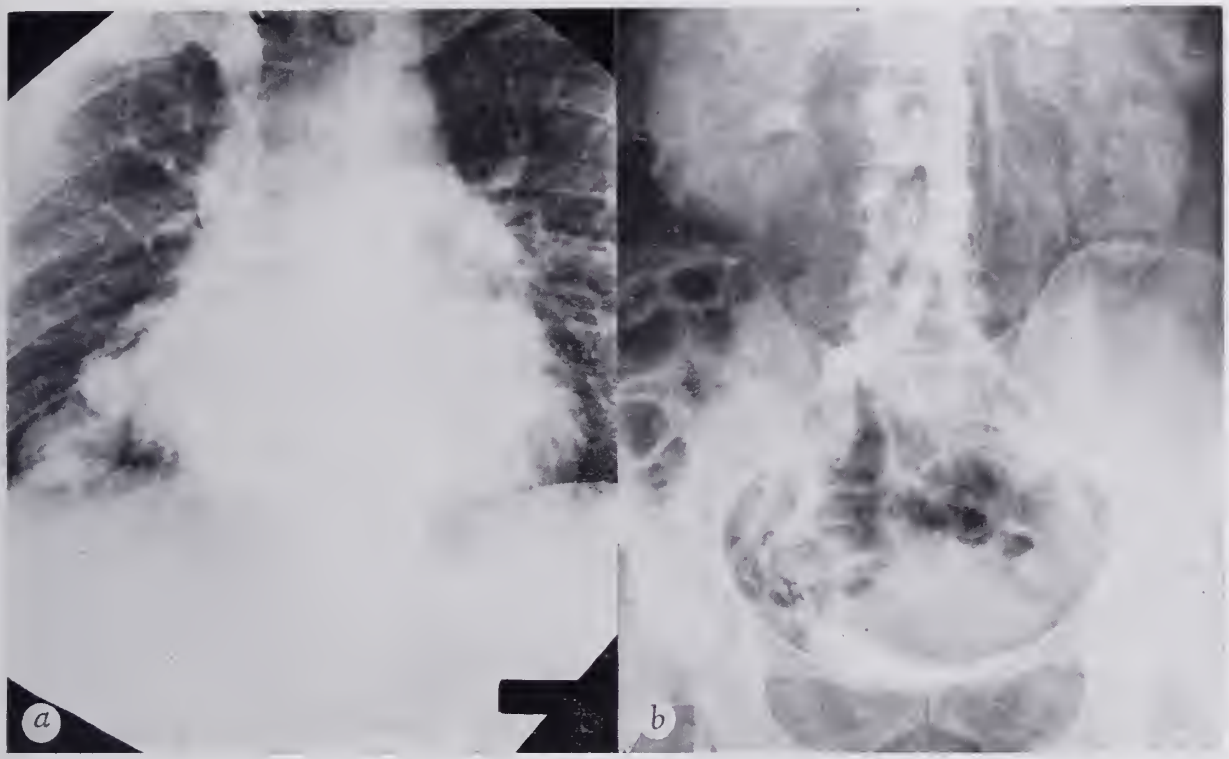


Figure 11. *a.* Pulmonary arteriovenous fistula in right cardiophrenic angle. This angiocardiogram demonstrates the large vascular channels which supply and drain the lesion. Surgical excision was carried out. *b.* Arteriovenous fistula involving the right uterine artery and vein. The patient had profuse menorrhagia for two months prior to surgical excision.



Figure 12. *a.* Stenosis with poststenotic dilatation of right renal artery of 42-year-old female with severe hypertension of six months' duration. Bypass graft was inserted, and the patient is normotensive five years later. *b.* Embolic occlusion of the left main renal artery and both common iliac arteries. Thrombo-endarterectomy at the aortic bifurcation restored circulation to the legs. Blood pressure remains elevated (160/100 mm. Hg).

accurate in only 90 to 95 per cent of cases, mainly because certain renal neoplasms showed no vascularity. Some of these were necrotic because of thrombosis of their arterial system, and others, such as carcinoma of the renal pelvis, were by nature avascular. In spite of this limitation, renal angiography can be of value and should be employed in selected cases when this differentiation is of prime importance.

At present, the study of pathologic changes in the vasculature of the kidney, and more particularly of occlusive changes, appears to be the most promising use of renal angiography. The association between hypertension and obstruction in the renal arterial system is well known, and it now appears that such obstruction is the etiologic factor in from 5 to 10 per cent of patients with high blood pressure. It is obvious that the angiographic examination of all hypertensive patients would be impossible. Thus, some form of clinical selection must be exercised to discover those patients whose difficulties are due to renal arterial disease. Such selection would eliminate all patients with long-standing hypertensive disease and those with a familial predisposition to it. Those who remain are in the small group of patients with hypertension of recent or sudden onset, including both children and adults who show evidence of unilateral renal disease, most often a hypoplastic kidney.

The obstructive process may be extrinsic to the renal artery (tumor, cyst or hematoma), or intrinsic (arteritis, thrombosis, embolism, atherosclerosis or congenital stenosis). In children, the congenital lesions are most common and can be easily corrected by means of a bypass graft. After this procedure, blood pressure returns to normotensive levels in most instances. In adults, in whom a recent onset of hypertension is often questionable, correction of the arterial narrowing or removal of a badly damaged kidney is less likely to have salutary effects (Figure 12*a*).

The most dramatic therapeutic results are observed in cases of embolic occlusion of the main renal artery. After such an accident, rapidly fatal malignant hypertension may develop, and thromboendarterectomy or nephrectomy can be lifesaving. This entity may be diagnosed accurately and easily by means of renal angiography, and this procedure should be considered for all patients who have hypertension of sudden onset associated with abdominal pain, hematuria and albuminuria (Figure 12*b*).

SUMMARY

I have reviewed some vascular disorders which are frequently seen in day-to-day practice. An understanding not only of their clinical and pathologic features but also of recent therapeutic procedures employed in their treatment is important. When this has been acquired, the importance of angiography in the investigation of the patient becomes apparent.

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Mercy Hospital Medical Day

The medical staff of Mercy Hospital, Des Moines, is planning a scientific program for Mercy Hospital Medical Day, Wednesday, October 5, and invites all doctors of medicine to attend it.

A noon luncheon in the Mercy Hospital Dining Room will open the activities. The scientific program is scheduled to begin at 2:00 p.m., and will include the following papers:

"The Investigation of Deaths of Public Concern"—Richard Ford, M.D., Department of Legal Medicine, Harvard University Medical School

"Bladder Neck Obstruction in Children"—Rubin H. Flocks, M.D., professor and head of urology, S.U.I. College of Medicine

"The Diagnosis of Hypertension"—Ray W. Gifford, Jr., M.D., consultant, Section of Medicine, Mayo Clinic; assistant professor of medicine, Mayo Foundation

SYMPOSIUM ON THE TREATMENT OF HYPERTENSION—Dr. Gifford, moderator; participants, members of Mercy Hospital Medical Staff: Paul From, M.D., internal medicine; John L. Fatland, M.D., urology; Joseph G. Schupp, Jr., M.D., internal medicine.

Medical Management of Peripheral Vascular Disease

ROBERT L. GRISSOM, M.D.

OMAHA, NEBRASKA

PERHAPS, LIKE ME, you have been confused by designations of diseases of closed systems such as the peripheral vasculature—designations which suggest that the entities involve only certain parts of the system such as the arteries, the veins, the arterioles or the capillaries. Such a classification serves a useful purpose, but it is important now and then for us to remind ourselves that when there is an involvement of arteries, there will also be a disturbance in the veins, in the capillaries and certainly in the lymphatics which we neglect most of all.

It seems most useful to consider three major groups of peripheral vascular diseases for which a great deal can be accomplished in medical therapy. These are arteriosclerotic occlusive disease of the arteries, thromboembolic disease of the veins and vasospastic disorders.

ARTERIOSCLEROSIS OBLITERANS

Arteriosclerosis obliterans is the commonest affliction of older men and women. There are marked atrophy of the leg muscles, loss of hair on the skin, excessive callous formation, changes in the toe nails and marked dependent rubor of the feet. This latter color change is related to the chronic dilatation of the capillaries and veins, probably secondary to anoxia and lack of nutrition to those vessels. This is an example of the extension of primarily an arterial disease to involve the other parts of the closed-system circulation.

There are two major types of arteriosclerosis obliterans, depending upon whether muscle flow or skin flow is chiefly compromised. If the involvement penalizes principally the arteries *to the muscles,* then the first and most important symptom is claudication. This is by no means limited to elderly people. One of our patients, a middle-aged man, had pain, numbness and coldness of the legs, and was unable to walk more than 25 feet. Younger individuals, particularly, quite often have lesions suitable for replacement with bypass grafts, and this possibility must always be uppermost in our thinking. Nevertheless, the number of leg arteries which are suitable for operative repair is a rather small minority of the total number susceptible to arterial occlusive disease. The arteries to the muscles differ from those to the skin in that they are subject to a considerable variability in demand for blood. With rest, there usually is no claudication and not any great requirement for blood flow. With exercise, however, a several-fold increase may occur.

By contrast, the skin's need for blood is relatively small at all times. Over the years, I have been impressed that claudication is quite well tolerated with or without therapy, and need not necessarily progress into incapacitating disease. In fact, such complaints—perhaps a third of them—have a tendency to improve spontaneously. The middle-aged man just referred to is a case in point. With conservative management, he improved and returned to work, even though the x-ray studies showed calcification in his abdominal aorta, and contrast medium injected into the aorta disclosed blockage of one iliac artery and narrowing of the other at the aortic bifurcation.

Of the various therapeutic measures which seem helpful, I think stopping smoking is the most important. The use of some vasodilators makes good sense physiologically. One of them, nylidrin (Arlidin®) is related to epinephrine. It is known that epinephrine increases muscle blood flow, and there is good evidence to show that nylidrin is effective in increasing muscle blood flow in the normal extremity. To apply this, however, to the patient with occlusive disease of the major vessels has not been quite so clear. It is perhaps worth a trial, but one should not be too hopeful of its success. The Buerger's exercises, in which the feet are alternately dependent, while some mild exercises are performed such as flexing the ankle, and then, when redness develops, the feet are put at rest and level, are quite helpful.

Intra-arterial injections of any of the vasodilating agents, including nylidrin, are in my opinion dangerous and ill-advised. I think this opinion is shared by a great many persons working in peripheral vascular disease because of concern over eventual injury to the arterial wall and the consequent formation of a nidus for subsequent plaque formation.

One very important suggestion to remember for the "night cramps" or "rest cramps" that occur in patients with arteriosclerosis obliterans is that

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great help can be obtained from quinidine, and to a lesser extent from antihistamines such as Benadryl®. These two drugs seem not to increase muscle flow, but have some nonspecific analgesic effect.

Although claudication is the major symptom of occlusive disease to the leg-muscle arteries, the development of gangrene is the major hazard to which the ischemic foot is susceptible when there is disturbance of the circulation *to the skin*. The best management of gangrene is the prevention of it. If the patient is careful and if the doctor advises him properly, before he develops bruises, burns or ulcers, gangrene will be a rare complication indeed. Such is the perversity of human beings, however, that they do not take care of their feet properly, and thus gangrene is a frequent problem, particularly in the charity wards. In our clinic it has been the practice to give printed instructions to patients who have ischemic feet. There is nothing original about this list. It is standard advice in many peripheral vascular clinics.

INFORMATION FOR PATIENTS OF THE PERIPHERAL VASCULAR CLINIC UNIVERSITY OF NEBRASKA HOSPITALS

1. Never use *tobacco* in any form.
2. *Keep warm.*
3. Take great care to see that the foot is not injured. Avoid crowded places.
4. Wear *wide-toed shoes* which cause no pressure, and have adequate arch supports. Use thick, loose socks.
5. Do not wear circular garters.
6. Do not sit with the knees crossed.
7. If the weight of the bedclothes is uncomfortable, place a pillow to hold the bedclothes above the feet.
8. *Do not apply any medicine to the feet* without directions.
9. *Do not apply any heat to the affected limb* without a doctor's consent.
10. Wash the feet at least every other day with warm water and soap. Dry thoroughly, especially between the toes, by mopping, not rubbing.
11. If the feet are dry and scaly, apply lanolin.
12. If the feet are moist, use powder.
13. Before cutting nails, soak feet in warm (not hot) water for 10 minutes to soften nails. Cut straight across. Don't cut down into the corners. Do not cut them close to the flesh.
14. Proper first-aid treatment is important. Consult your physician for any redness, blistering, pain or swelling.
15. Every three months do the following: On each day for 10 days, soak the toes and soles of both feet for 10 minutes in a fresh warm (not hot) solution made by dissolving one 2-grain tablet of potassium permanganate in a quart of water. (Remember that potassium permanganate is a poison when taken internally.)

It is interesting to note that in a study done by Wessler and Silberg,[1] in Boston a few years ago, there was a comparison between 38 patients who had major amputations for gangrenous extremities and 37 others who had a similar type and extent of disease, but required either very minor amputations or only conservative management. In both groups there were approximately the same percentages of instances of previous injudicious therapy on the part of the patient. The only differences between the two groups which could be shown as statistically significant were a rather higher frequency of absence of popliteal pulse, neuropathy and congestive failure in those who had had major amputations. On the other hand, the incidence of coronary disease, hypertension, claudication and diabetes was strikingly high in both groups, emphasizing how frequently the arteriosclerotic process is generalized and even may be causing more serious disease elsewhere than in the legs. The point of this study was that with conservative management, even though it takes a very long time, it is possible to obtain healing in most of these extremities.

It has been helpful for me to ask myself the following four questions, when there has been gangrene:

1. Is there infection?
2. Is there diabetes?
3. Is there neuropathy?
4. Is there ischemia?

A rough rule of thumb is that 30 per cent of diabetics with gangrene who have had one leg amputated will have the other leg off in three years; 50 per cent will lose the second leg within five years.[2] This is not only an indication of the extent of the disease and of its bilateral nature, but also is an indication of the kind of person who gets the gangrene.

There is some question as to how much help may be obtained from sympathectomy. It has been said that now and then sympathectomy may make the condition worse, and even precipitate gangrene. It certainly is true that the vasodilating agents may act paradoxically to increase the blood supply in those areas where there is no major occlusive disease, at the expense of the blood supply in the ischemic tissues. The vasodilating agents have the additional disadvantage that they may cause hypotension and tachycardia, thereby further interfering with the blood flow to the ischemic foot.

THROMBOEMBOLIC VENOUS DISEASE

The next major category is thromboembolic venous disease. Here again, the secret of caring for the patient is promptness. Once the disease has progressed to a severe, chronically edematous state, with dependent cyanosis, hemosidirin deposits in the skin, ulceration and fibrosis, there is not very much that can be done. In the early,

more treatable stage, however, the two major concerns are embolic phenomena to the lungs and the avoidance of "post-thrombophlebitic sequelae."

The differentiation between phlebothrombosis and thrombophlebitis has less and less value as time goes on, and the distinction, while perhaps originally valid, is now known to be only a rough guide as to the propensity for pulmonary embolism. The incidence of thromboembolic disease following surgical operations remains about 3 per cent—not greatly different from what it was 25 years ago. Dr. Anlyan,[3] at Duke University, believes that this constitutes evidence that early ambulation has not brought about any great reduction in the incidence of the disease, and that there may be a more fundamental cause than has so far been suspected, perhaps related to changes in the pituitary-adrenal axis.

In Dr. Anlyan's view, the most important thing to do for the patient with any kind of acute thromboembolic disease is to place him at once upon anticoagulants such as heparin, 15 mg. subcutaneously every four hours for about eight days, followed then by Dicumarol® or coumadin anticoagulants for a longer period of time. On such management as this, in Dr. Anlyan's series of 150 patients, more than half had no sequelae at all; about 19 per cent had only to wear elastic supports; 13 per cent had slight to moderate edema; 14 per cent had dermatitis; only 9 per cent had incompetent superficial veins; and 2 per cent had ulceration. If elastic supports are necessary, it is wise to use actual rubber supports rather than just Ace® bandages, which are relatively ineffective. The venous pressure about the ankle in a standing position rises to over 100 mm. Hg. in the average adult, a higher pressure than the Ace bandages can counteract.

Prolonged venous insufficiency leads to chronic edema, which is relatively rich in protein, and eventually produces fibrosis. No matter what the physician attempts to do at that stage, he cannot reduce it. In early phlebitis, the use of fibrinolysin or plasmin is always considered. Recently it has been shown by competent observers that all of the plasmin activity in products now commercially available can be accounted for by its streptokinase content. The major complication resulting from its use has been a febrile reaction, which occurs in about 50 per cent of cases. At the present time, I cannot recommend fibrinolysin as helpful in dissolving the clot. To be sure, heparin and Dicumarol do not attack the clot at all, but only prevent an extension of it. There is a great need for research toward the development of agents that will dissolve clots. Let us hope that in the near future such agents will be available.

VASOSPASTIC DISORDERS

The third major category, the vasospastic disorders, are often spoken of collectively as Raynaud's phenomenon. These are very common. Vasospastic disease complicates a great number of peripheral vascular disorders. However as a specific entity, Raynaud's disease is quite rare. Examples are given of peripheral vasospastic disorders—Raynaud's phenomenon—in scleroderma; in a patient with cryoglobulinemia found to have multiple myeloma and to be developing terminal gangrene not only of his fingertips but also of his eartips and nose tip as well; and in a patient with thromboangiitis obliterans or Buerger's disease—a physician who had all of his flare-ups associated with heavy smoking and remissions when he stopped smoking. In a patient with persistent blueness or redness in the fingers, no gangrene or other severe disturbance developed, nor was there ever any evidence of white spots or of cold, white fingers. Thus, the ailment was not Raynaud's phenomenon by definition. However, the presence of collagen disease should be suspected in patients who have persistent redness or blueness of the fingers. In a young woman with typical Raynaud's disease, there were calcification in the terminal digits, sclerodactylia and terminal gangrene of the fingertips. In this condition, the use of vasodilating drugs, sympatholytic agents and even sympathectomy are worthwhile. Again, it is important for the patient to avoid smoking.

SUMMARY

In summary, these three great classes of peripheral vascular diseases—arteriosclerosis obliterans, thromboembolism with its persistent insufficiency of the circulation, and primary and secondary vasospastic disorders—all depend a great deal upon what the physician does or does not do.

The most important thing that we as physicians can do is to instruct the patient in prophylactic measures, so that he may avoid gangrene, the most costly and devastating sequela of arterial insufficiency.

Early treatment of venous disease will help the patient avoid subsequent swollen extremities, which not only are cosmetically disfiguring but also constitute a severe handicap. The use of vasodilator agents has, in general, failed to give much help because the healthier vessels dilate more than the diseased ones, thereby proportionately cheating the ischemic extremity of blood.

Finally, the recognition of infection, spasm, neuropathy and abnormal reactions to cold are important both in diagnosis and in management.

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The Role of the Surgeon in Atherosclerosis

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THE SURGEON'S greatest responsibility to the patient with atherosclerosis is to discover localized occlusions which may be surgically remedied, and to carry out appropriate direct surgical treatment of such lesions. Although atherosclerosis is a generalized disease, localized occlusions are often extremely disabling to the patient, and if untreated may progress to tissue death distal to the occlusion. Among the lesions that are reparable by direct surgical attack are arterial aneurysms, dissecting aneurysms and segmental thromboses. Our attention in this paper will be limited to segmental occlusions and their treatment by direct surgical methods, specifically by intimectomy. Sympathectomy for peripheral vascular disease is an indirect surgical treatment which yields results much less satisfactory than technics which reestablish main-channel arterial blood flow. Sympathethectomy is, however, frequently indicated in diffuse atherosclerosis and may afford the patient considerable symptomatic relief. In general, the results we have obtained with sympathectomy in occlusive peripheral vascular disease have been unpredictable and generally disappointing.

INDICATIONS FOR DIRECT SURGICAL TREATMENT

Table 1 lists the indications or requisites for direct surgery in cases of atherosclerotic arterial occlusion. In general, segmental occlusions amenable to surgical correction are likely to be found in the younger patients whose arterial deficit is localized or is unilateral rather than diffuse, where the difficulty is claudication rather than gangrene, where the part distal to the occlusion retains good nutrition as manifested by the presence of hair on the extremity, good muscle mass and normal appearing nails, and particularly where physical examination has revealed that the loss of pulsation in the main arterial channel is at a high or proximal level.

Thus, the patient who complains of intermittent claudication in both lower extremities and of impotence, and who has no palpable arterial pulsation in either groin probably has a thrombosis of the distal aorta—the so-called Leriche syndrome. The patient who has intermittent claudication in one lower extremity and no femoral arterial pulsation on that side probably has an iliac arterial occlusion, and is probably a suitable candidate for surgical correction. The patient with a femoral pulse but no popliteal pulse, in whom oscillometric studies reveal a loss of arterial pulsation in the upper thigh, probably has occlusion of the superficial femoral artery and may have a patent arterial tree from the popliteal artery distalward, so

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TABLE 1

INDICATIONS FOR DIRECT SURGERY IN ATHEROSCLEROTIC ARTERIAL OCCLUSION

1. Segmental occlusion
2. Large vessel involvement
3. Distal gangrene absent or minimal
4. Adequate distal "run-off"
5. Reasonable operative risk



Figure 1. Operative arteriography in T. K. No. A-4833, a patient with bilaterally palpable common femoral artery pulsations, but no popliteal or pedal arterial pulse. The chief complaint was intermittent claudication. The arteriograms revealed bilateral segmental superficial femoral artery occlusion, with good distal "run-off." Intimectomy on the right (April 1, 1960) restored main-channel arterial flow and relieved symptoms on that side. The left superficial femoral occlusion will be corrected at a second operation.

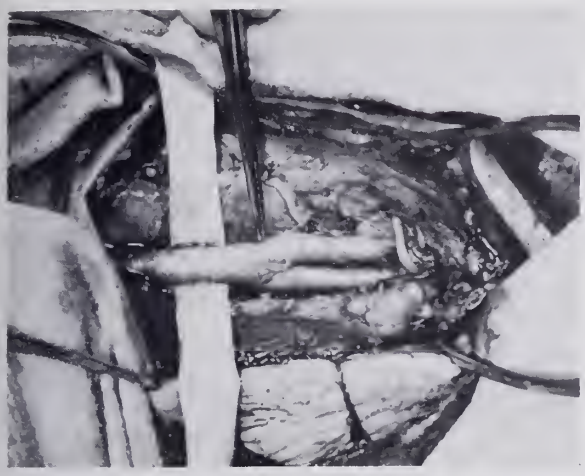


Figure 2. Internal carotid artery occlusion (H. Y., No. 37295). Surgical exposure of the left carotid bifurcation under local anesthesia. Preoperative retinal artery pressures measured 130/70 O.D. and 82/58 O.S. Intimectomy, September 9, 1958, was ineffective because of intracranial extension of the internal carotid thrombosis.

that main-channel arterial blood flow can be reestablished. In contrast, the patient whose lower-extremity difficulty is associated with a palpable pulse in the popliteal artery probably has occlusion of the smaller vessels in the leg that cannot be approached satisfactorily by direct surgical methods. An occasional patient is found who has palpable femoral, popliteal and dorsal pedal arterial pulsations, but who still has evidences of arterial insufficiency in the extremity. Such an individual has small-artery disease and is not a candidate for direct surgical treatment of the vessels. The patient in this latter situation may obtain benefit from lumbar sympathectomy.

In general, direct surgical procedures are carried out upon the larger vessels proximal to the knee in the lower extremity, and proximal to the elbow in the upper extremity. In any case, the removal of a segmental occlusion will be effective only if there is an adequate run-off in the distal arterial tree. Figure 1 indicates an adequate arterial run-off in the lower extremities in a patient with bilateral, segmental superficial femoral arterial thrombosis. Usually, arteriographic evidence of an adequate run-off is obtained before or during operation, and before the surgeon proceeds with a technic designed to relieve segmental thrombosis.

Carotid atherosclerotic occlusions present a particular problem in diagnosis and treatment.[4] In general, one suspects carotid thrombosis of a localized nature, either partial or complete, in the patient who has transient small strokes from which he recovers. Physical examination may reveal a bruit at the site of partial carotid occlusion. By routine measurement of retinal artery pressure by means of the ophthalmodynamometer in patients with early stroke or transient strokes, evidences of carotid occlusion may usually be discerned. A 20 to 25 per cent reduction in retinal artery pressure on the side of the suspected occlusion is consistent with the diagnosis. We have been reluctant to use arteriography in such patients because of its potential hazards, and have preferred in the suspected case of internal carotid artery occlusion to proceed to direct exploration under local anesthesia (Figures 2 and 3). When the direct exploration reveals atherosclerotic occlusion at the carotid bifurcation, and when there is no extensive propagated thrombosis of the entire internal carotid on the affected side, one may expect the relief of such occlusion to be followed by elevation of the retinal artery pressure on that side to a normal level. Then, depending upon the type of pathologic change within the cerebral arteries or within the brain itself, there may or may not be recovery of the patient to a normal neurologic status.

In the circumstance of transient strokes, the



Figure 3. Lateral and end-on views of carotid bifurcation atherosclerotic thrombosis. Specimen (F. A., No. 28502) obtained by intimectomy January 29, 1957. The external carotid branch of the specimen shows narrowing due to intimal thickening, and the internal carotid branch shows extreme narrowing by an atherosclerotic plaque, with recent thrombosis completing the occlusion.

correction of an associated carotid occlusive lesion is likely to be followed by cessation of the episodes of cerebral ischemia. In the case of established changes within the brain, evaluation is difficult because one can never know what the course would have been without relief of the carotid obstruction.

It is interesting to take note of the frequent localization of segmental thrombosis to bifurcations such as the carotid and aortic, to major branchings of vessels such as the external iliac originating from the common iliac artery, the subclavian from the arch of the aorta and the superficial femoral from the common femoral, and furthermore the frequent beginning or terminating of segmental thrombosis at an area of impingement upon a major artery such as the first rib upon the subclavian artery and the aponeurotic adductor foramen upon the superficial femoral-popliteal arterial junction.

TECHNICAL CONSIDERATIONS

The direct surgical technics available for correction of segmental atherosclerotic arterial occlusion include resection and in-continuity "graft" with autografts of vein, transplants of homogenous artery or synthetic prosthetic tubes of Dacron and Teflon, by-pass "grafting" with the same materials used for in-continuity reconstruction, intimectomy (thromboendarterectomy) or combined intimectomy and "graft."[2]

In our earlier experience with the correction of segmental vascular occlusion, we tended toward the use of resection and in-continuity reconstruction or by-pass technics. In the past four years, we have gradually switched our interests to intimectomy. Intimectomy is considered a more appropriate procedure than thromboendarterectomy, since not only the thrombus within the vessel but the thickened and atherosclerotic intima associated with the thrombosis is removed. This procedure provides a larger, smoother arterial lumen for the main arterial blood flow.

Grafts or transplants are used in conjunction with intimectomy only when they are necessary due to dilatation of a segment to be intimectomized or because of trauma to the arterial wall that necessitates replacement. Thus, when various conduits are used in conjunction with intimectomy—which is seldom—they are short in length and seem less likely to re-thrombose than do the longer conduits.

Intimectomy is advantageous in that no tissue has to be transplanted, nor must any foreign tissue or other material be introduced into the patient. Furthermore, there is the theoretic advantage of the opening of collaterals from the intimectomized segment. That this actually occurs has been demonstrated by Cannon.[3]

Certain special intruments have been found useful in the performance of intimectomy. These include the spring serrefine clamps devised by Potts, the Cannon thromboendarterectomy loops and the small Freer elevators used in nasal surgery. By using Cannon loops for blind intimectomy over long distances, the surgeon does not find it necessary to expose the thrombosed segment of artery completely. With this instrument, he can intimectomize the entire superficial femoral artery through two incisions, one in the upper thigh and one in the lower thigh. The limiting of exposure lessens the tissue trauma and the possibility of interference with functioning collateral arterial circulation.

At the completion of intimectomy, blood is allowed to spurt from the intimectomized segment to wash out any loose particles of intima or thrombus that might otherwise become arterial emboli. Gentle and accurate suturing of the arterial wounds is indicated in intimectomy, as it is in arterial grafting procedures. A particular attempt is made at the distal termination of the intimectomy to divide the artery almost completely, so as to facilitate suture-fixation of the intima distal to the intimectomy site. Thus, intimal elevation, dissection and superimposed thrombosis will be less likely to occur.[1]

It is our practice to instill 50 to 75 mg. of heparin solution into the arterial bed locally at and distal to the intimectomy site to provide temporary inhibition of clotting, particularly during the period of interruption of arterial flow to the extremity. Ordinarily, we do not continue heparinization after the completion of the operation.

RESULTS FROM INTIMECTOMY

The results obtained in 49 patients subjected to intimectomy for segmental atherosclerotic occlusion are indicated in Table 2. It should be noted that, in general, better results are obtained when intimectomy is applied to the larger arteries. The patients represented by the data in Table 2 had been severely disabled as a result of the segmental occlusions, and in many instances in the lower extremity occlusions limited areas of gangrene were already present or gangrene was impending.

As regards the carotid bifurcation category, the good results indicated in six patients reflect the restoration of blood flow to a normal level through the once partially or completely occluded internal carotid artery, as measured by ophthalmodynamometry. Thus, in this category good results do not necessarily mean recovery from a preexistent stroke. Two of the patients were unchanged by the operation, and in these patients back-bleeding from the distal internal carotid was not obtained, and the presence of thrombosis at an intracranial level was indicated. In one patient, postoperative thrombosis at the site of intimectomy seemed to result in a clinical picture worse than the patient had had initially, and thus the result is categorized as poor.

The good clinical results which may follow carotid intimectomy are evident in the course of a pa-

TABLE 2

RESULTS OF INTIMECTOMY FOR THE RELIEF OF SEGMENTAL ATHEROSCLEROTIC OCCLUSION

Veterans Administration Hospital, Iowa City

Site of Occlusion	*Results*			
	Good	*Unchanged*	*Poor*	*Total*
Carotid bifurcation	6	2	1	9
Subclavian-brachial	1	2	1*	4
Aortic-iliac	12	2	1	15
External iliac-femoral	2	1	1*	4
Superficial femoral-popliteal	8	1	8*	17
Totals	29	8	12	49

* Amputation followed.

The results of intimectomy listed as "good" indicate restoration of main-channel arterial flow through the previously occluded segment to provide a palpable distal pulse and symptomatic relief (or return of retinal artery pressure to normal in the case of internal carotid artery).

tient (J. L., age 59, No. RA2490) who was admitted in July, 1959, because of recurrent episodes of hemiplegia and aphonia which had in all instances cleared spontaneously. Preoperative retinal artery pressures measured 55/28 on the right side, as compared with 90/50 on the left. Following right common and internal carotid intimectomy, with relief of a nearly complete obstruction of the internal carotid artery, the pressures measured 108/38 on the right and 125/52 on the left, and the attacks of hemiplegia and aphonia were completely alleviated. The patient remains in good condition at this time.

As indicated in Table 2, the results of intimectomy when applied to the aorta and common iliac arteries were excellent. The one result of aortic-iliac intimectomy indicated as poor refers to a patient (W. L., No. 11776) who preoperatively had had evidences of arterial insufficiency in the left lower extremity and an absent left femoral pulse. Aortic-left iliac intimectomy restored pulsatile main channel arterial flow to the left lower extremity and relieved the symptoms on the left. Postoperatively, symptoms and signs of arterial deficit in the right lower extremity became evident. It is believed that dislodged thrombotic material was carried into the right lower arterial system as emboli. Arterial embolization by loosened thrombotic material is an ever-present hazard of intimectomy. In the smaller vessels of both upper and lower extremities, the results were less satisfactory, and in some instances the clinical status of the extremity was worse following unsuccessful intimectomy. In all such instances there appears to have been an inadequate run-off, and these cases represent for the most part a progression of the patients' severely inadequate circulation to the point of tissue death or an extension of limited tissue death already present before operation.

In 10 instances, amputation was necessary after unsuccessful attempts to remove obstruction by intimectomy. In six of the eight amputations which followed superficial femoral-popliteal arterial intimectomy, amputation was thought necessary because of the persistence or natural progression of arterial insufficiency, rather than because of an unsuccessful operative procedure. In the other two amputations following superficial femoral-popliteal intimectomy, it was thought that the procedure had contributed to the rapid development of gangrene following the operation. Nevertheless, the overall results in this severely disabled group of patients, many with impending gangrene, impress us as being satisfactory. This is indicated by the 60 per cent relief of main-channel arterial flow obstruction.

We have not performed postoperative arteriography upon this group of patients to study the possibility of aneurysmal dilatation in the intimectomized segments. However, we have no clinical evidence thus far of aneurysm at the site of intimectomy, and we have been content to accept a restoration of circulation, with palpable arterial pulsation distal to the intimectomy site and the relief of symptoms and signs of arterial insufficiency, as evidence of a satisfactory result.

Since intimectomy has been performed frequently in this hospital only during the past four years, the follow-up results are based upon postoperative evaluations obtained, for the most part, a few months to four years following operation. There were two postoperative deaths in this series of intimectomies—one (W. L., No. 11776) from coronary occlusion, and the other (G. B., No. 38427) from anuria.

SUMMARY

It is mandatory that the surgeon search for evidence of segmental arterial occlusion in patients suffering from atherosclerosis. Intimectomy is a satisfactory method of dealing with many of the segmental atherosclerotic occlusions. Intimectomy has the theoretic advantages of utilizing the patient's own tissues without transplantation, and of reopening collaterals originating from the thrombosed segment. The 60 per cent good results obtained in this group of severely disabled patients by intimectomy is encouraging, and justifies further use of the procedure.

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Inferior Vena Cava Ligation

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DES MOINES

Ligation of the inferior vena cava for pulmonary embolism can be a lifesaving procedure. Though there appears to be some reluctance on the part of many surgeons to employ it, the reasons for their hesitancy remain an enigma, for the majority of published data suggest that the postoperative results have been uniformly good.

The dramatic effectiveness of this technic was recently reemphasized to us in a case of pelvic thrombophlebitis with multiple septic pulmonary emboli.

CASE REPORT

E. H., a 40-year-old white woman, was discharged from the hospital on April 27, 1959, and readmitted on the same day. Eleven days earlier, a vaginal hysterectomy with anterior and posterior repair had been done. The postoperative course had been uneventful. Three days before discharge, a mild non-productive cough had developed, but it was insufficiently alarming to the patient to warrant her reporting it to her physician.

When she reached home, pain had developed suddenly in the right shoulder and had spread gradually to involve the right lateral chest. It was aggravated by deep inspiration. Chilly sensations followed, and the temperature rose to 102°F. She was comfortable only in the sitting position, and was unable to lie upon her right side. Readmission was advised.

When first seen, she was a well-developed, well-nourished female in obvious distress. The temperature was 102°F., the blood pressure was 112/70 mm. Hg., and the pulse was 112 per minute. Respirations were grunting in character, and there were decreased excursions of the right hemithorax. Breath sounds were diminished there, but there were no rales. Examination of the extremities was negative.

The pertinent laboratory data consisted of a white blood count of 25,600/cu. mm., with a hemoglobin of 9.6 Gm. per cent. The urine sediment was loaded with white and red blood cells. Albuminuria was present. The chest x-ray was reported as negative.

From the clinical and laboratory data, we assumed that the patient had developed a pulmonary embolus with coincidental urinary tract infection. Intravenous heparin and oral coumadin therapy were begun, and therapeutic levels were rapidly achieved. The patient was transfused. On the following day, the urine was reported as positive on culture for E. coli, sensitive to tetracycline therapy. Tetracycline had been started prophylactically on her readmission.

The patient became rapidly, increasingly and seriously ill. Her temperature curve was decidedly septic in type, and her white blood count rose to 33,500/cu. mm. Several additional episodes of chest pain occurred. The cough had become protracted and the sputum bloody. The chest x-ray demonstrated lesions in both lung fields, and blood cultures taken on admission were reported as showing coagulase-positive Staphylococcus aureus, sensitive to chloramphenicol and streptomycin.

Antibiotic therapy was then altered to include these agents. After an initial temperature response, the curve rose again and the blood pressure fell to shock levels. Adrenal steroids were administered, and the blood pressure stabilized at near normal levels but could be kept there only by their continued administration.

Chest pain continued in paroxysms, and it was increasingly apparent that embolization had not been halted by the anticoagulant therapy. It was decided that inferior vena cava ligation was indicated in spite of the very critical condition of the patient. The prothrombin time was restored with intravenous vitamin K-1 oxide, and the procedure was performed on the fifth hospital day. Pelvic cellulitis was demonstrated at operation.

There were no further bouts of chest pain after the operation, but the fever did not respond to the selected antibiotics. Abscess cavities were present in both lung fields on chest x-ray examination. Novobiocin was then begun. The temperature responded almost immediately, but continued elevated to a lesser degree until the thirty-third hospital day.

Clinical improvement, though slow, was progressive, and it was possible to discharge the patient on the thirty-fifth hospital day. At that time, blood and sputum cultures had been negative on two occasions, and the white blood count had declined to 10,100/cu. mm.

The patient was advised in gradual ambulation and provided with elastic stockings. At that time, she was experiencing moderate bilateral edema as high as the knees, and both extremities appeared dusky below that level. Some cough remained.

One month later, the cough had disappeared.

Dr. Zoeckler made this presentation at a meeting of the Medical Library Club, in Des Moines, last spring.

There was only a trace of edema present bilaterally, but she had noted a tendency for her legs to become markedly tired on prolonged standing. The chest x-ray showed that the abscess cavities had closed.

The patient was last seen six months postoperatively, at which time she felt well. Her legs continued to tire in the evenings. She had discontinued the use of elastic stockings. A few varicosities of the left calf were noted. There was no edema. The chest x-ray showed only residuals of the previous inflammatory disease.

A decision was made to survey our contact with this technic over a 10-year period.

METHODS AND MATERIALS

Fourteen cases of inferior vena cava ligation were collected. Twelve were seen at the Veterans Administration Hospital in Des Moines, and one each at two private hospitals. Those not evaluated during the previous year were checked upon either by letter or in person. The letter encompassed the main points of interest and was usually answered by the patient's family physician. Particular attention was paid to the presence or absence of edema, varicose veins, discomfort, skin changes, lower-extremity ulceration, the effect of sympathectomy on the over-all result, and economic rehabilitation.

RESULTS

A. General (Table 1). Inferior vena cava ligation was performed upon 14 patients between October, 1949, and May, 1959. The duration of observation ranged from two to 119 months, and averaged 58 months. Ages varied from 24 to 64 years. All but one of the patients were males. Their occupations ranged from sedentary activity to extremely vigorous labor.

B. Indications for Operation (Table 2). The indication for inferior vena cava ligation was multiple pulmonary emboli in nine instances. Of this group, five had recurrence of embolization in the face of adequate anticoagulant therapy, and one had undergone superficial femoral vein ligation as well. Anticoagulants were regarded as contraindicated in two patients. One of these presented a history of bleeding duodenal ulcer; the other was in the immediate postoperative phase of total colectomy for chronic ulcerative colitis. One of the nine did not receive anticoagulants for reasons that remain obscure.

TABLE 1

INFERIOR VENA CAVA LIGATION
THE STUDY GROUP

Occupations	*Patients*
White Collar	4
Farmer	3
Laborer	3
Chauffeur	2
Priest	1
Unemployed	1
Total	14

Age: 24-64 years (av. 49)
Sex: 13 M; 1 F
Months Followed: 2-119 (av. 58)

TABLE 2

INDICATIONS FOR
INFERIOR VENA CAVA LIGATION
14 PATIENTS

	Patients
Recurrent Pulmonary Embolism	
A. Anticoagulant Failure	5
B. Anticoagulant Failure Plus Venus Ligation	1
C. Anticoagulant Contraindicated	2
D. Anticoagulant Not Given	1
	9
Single Pulmonary Embolus	
A. Anticoagulant Contraindicated	2
B. Failure Anticoagulant Therapy	1
	3
Septic Pulmonary Emboli	2

The operation was performed upon three patients with single pulmonary emboli. In two, anticoagulant therapy was contraindicated because of recent cerebral hemorrhage and hemorrhagic prostatitis, respectively. In the third patient, anticoagulants had failed to check proximal progression of the phlebitic process.

In two instances, the procedure was done for recurrent septic pulmonary emboli. One of these had suppurative pelvic thrombophlebitis; the other had recently undergone cholecystectomy.

C. Mortality and Recurrence of Embolization. There was no operative mortality, and no recurrence of emboli. Two patients were dead—one of them two months after operation from a proved myocardial infarction, and lost to long-range follow-up, and the other as the result of an accident four years after his operation.

D. Sequelae (Table 3).

1. Edema. Edema was present in all patients immediately after operation, and in nine of 13 available for long-range study. It was bilateral in all, and when more extensive on one side, was almost invariably of greater magnitude in the extremity where phlebitis existed. In every in-

TABLE 3

SEQUELAE OF
INFERIOR VENA CAVA LIGATION

	Patients
A. Edema	9
B. Varicosities	
1. Extremities, bilateral	6
unilateral	3
2. Abdomen	2
3. Sacrum	2
C. Extremity Discomfort	9
D. Skin Changes	6
E. Recurrent Phlebitis	2
F. Ulcer	7

stance, edema was greatest during the evening hours. All but two found it necessary—or more comfortable—to wear elastic supports during the working day. Edema was classed as mild in two instances, and moderate in seven. Of the two patients in whom edema was mild, one had suffered for 10 years from chronic phlebitis of the left lower extremity; the other had previously undergone vein stripping for varicosities of one limb, and on the other had developed a traumatic ulcer with attendant phlebitis. In considering the seven patients with moderate edema, we found that four had had no problem with the lower extremities prior to the admitting episode, that two had had prior phlebitic episodes, and that one had had bilateral varicosities with chronic edema.

Four patents had no edema at the time of the study. None of these had a history of prior disease of the lower extremities, and one—the patient with pelvic sepsis—had had no evidence of phlebitis at any time.

A closer correlation exists between the presence of edema on long-term study and the development of complicating diseases capable of influencing the peripheral vasculature than exists between the presence of edema and the preoperative status of the lower extremities. Of the nine edematous patients, four developed congestive heart failure. One was markedly obese, another had recurrent bouts of phlebitis and a third had polycythemia vera.

2. Varicosities. Varicosities were found in nine of the 13 patients at the time of evaluation. They were unilateral in three, and bilateral in six. In addition, two of these nine patients presented varicosities of the lower abdominal wall, and two had varicosities of the sacrum. Seven of the nine patients did not have varicosities noted prior to surgery. There was no correlation between the side of phlebitis and the location of the varicosities. It was not possible in this instance to correlate them with the presence of a complicating disease as discussed above.

3. Discomfort. Nine of the 13 patients complained of some type of discomfort in the lower extremities at the time of the follow-up examination. This was usually in the nature of weakness and tiredness following prolonged standing or vigorous exercise. One patient noted nocturnal calf-cramping which had not been present prior to surgery, and another complained of claudication in the left calf on prolonged walking. This patient's course has been complicated by arteriosclerotic heart disease with angina pectoris and myocardial infarction. Another suffers from diabetes mellitus and congestive heart failure, a third has congestive heart failure, and a fourth has polycythemia vera with ulceration present prior to surgery.

The presence of discomfort in the lower extremities could not be correlated with the presence of edema, since three of the four patients who were edema-free complained of this problem. It seemed more closely related to the presence of varicosities, for of the nine patients in this group, eight had varicosities at the time of the study

4. Skin Changes. Some type of skin change was present in six of the 13 patients. In two of them, this took the form of scaliness; in two, stasis pigmentation; in one, a firm brawniness; and in the last, the appearance of an occasional pinkish rash. The two with stasis-type pigmentation have congestive heart failure, and the one with brawny induration has both diabetes mellitus and congestive heart failure.

5. Ulceration. Seven of the 13 have had ulcerative lesions on one or the other extremity. Four of these have developed in relationship to varicosities after trauma, and one had an indolent ulcer present before operation, probably related to polycythemia vera.

E. Effect of Sympathectomy on Over-All Results. Right lumbar sympathectomy was performed nine times, and bilaterally on one occasion, at the time of inferior vena cava ligation. There appears to be no relationship between the performance of this adjuvant procedure and the presence or absence of postoperative edema or other sequelae. Of four patients who were edema-free after operation, all were sympathectomized; but in six others, edema varied from mild to moderate in degree, and was either bilaterally symmetrical or greater on the side of sympathectomy in four of the six.

Of nine patients with discomfort in the lower extremities after operation, six had been sympathectomized, whereas four with no distress had had this procedure. There was, in similar fashion, no detectable relationship between this procedure and postoperative varicosities, skin changes or ulcers.

F. Economic Rehabilitation. All 13 patients available for long-range study were able to return to

gainful employment. Four found it necessary to discontinue working for periods ranging from four to six years after surgery because of congestive heart failure. One retired, and one was able to work only half-time as a result of a chronic ulcer on the right leg which antedated his surgery. Another has been handicapped by recurrent episodes of superficial phlebitis and recurrent pancreatitis. Three others have chronic duodenal ulcer, chronic ulcerative colitis with colectomy, and arteriosclerotic heart disease, respectively. These conditions somewhat limit their activity, but are in no way related to their operative procedure.

DISCUSSION

There is general agreement that the major weapon in the prevention and treatment of thromboembolic disease is the use of adequate anticoagulant therapy.[1-3, 5, 12] Of such patients, between 85 and 90 per cent may be successfully treated with these agents.[1-3] In certain instances, anticoagulant therapy may fail or be contraindicated, and in others—chiefly septic pelvic thrombophlebitis and phlegmasia cerulea dolens—may be ineffective from the start.[1, 2, 11, 12] In such situations, venous ligation then becomes the first line of defense. Dale,[1] Kirtley[2] and others[3, 5, 8, 9, 12] have amassed a wealth of evidence to demonstrate that ligation must be higher than the superficial femoral vessels if recurrent or fatal pulmonary emboli are to be dependably prevented. Their data, coupled with the high incidence of adverse sequelae demonstrated by Robinson and Moyer[4] in common femoral vein ligation, would indicate that inferior vena cava ligation with ovarian vein ligation is the procedure affording maximum protection from venous thrombosis in pelvic and lower-extremity veins.

Baker[5] has shown that once non-fatal embolism occurs, the chance that a fatal embolus will follow is about one in five, and that another embolus will occur is about three in 10. Therefore, it behooves the clinician to decide swiftly that inferior vena cava ligation is indicated, and then to move with dispatch.

One observes a great deal of ennui toward this operation, apparently engendered by a fear of disabling sequelae. A parallel might be drawn between this operation and the amputation of an extremity for diabetic gangrene. In the latter situation, no particular concern is manifested over what the obvious sequela will be, yet the one is no more a lifesaving procedure than the other.

In spite of the fact that this operation is seldom done in "good risk" patients, the operative mortality has been negligible. It is true that an occasional death has been reported.[1-3, 5, 12, 14] The procedure approaches 100 per cent effectiveness in preventing recurrent emboli.[1, 2, 6] These statistics were borne out in this series of 14 patients, for there was no operative mortality and there was no recurrence of embolization, despite the fact that many of the patients were seriously ill when operated upon.

The consensus seems to be that post-ligation sequelae result largely from the condition for which the procedure is done and on the preoperative status of the extremities.[1, 2, 6, 9] Collins[14] reports that in his series, done largely for septic pelvic thrombophlebitis, postoperative and long-term sequelae have been minimal, presumably because there had been no vascular damage to the lower extremities preoperatively. In other series where the basic problem was peripheral thromboembolic disease, the incidence has been considerably higher.[1, 2, 4-6]

Edema is an almost constant immediate postoperative finding, but it improves with the passage of time. Ray and Burch,[10, 13] who made an exhaustive study of 12 of Collins' patients, have shown that subsidence of edema parallels a decrease in peripheral venous pressure with the passage of time. There is a tendency to correlate the persistence of edema with the status of the vascular disease prior to surgery, and our own series substantiates this finding in a negative way. Although we could not correlate the severity of the residual edema with the severity of the preceding vascular disease, it is of some significance that the patients who presented without preceding vascular problems were the ones in whom postoperative edema disappeared on long-range follow-up. Burch and Ray found that sympathectomy had no influence on the occurrence, degree or disappearance of edema. Our figures corroborate this finding.

Varicosities appear more frequently in this series than is the rule in the other groups surveyed. We have no explanation for this disparity. In no instance have varicosities been a therapeutic problem.

Discomfort and ulceration do not appear in most series with any predictable frequency. It would seem that the development of ulceration is directly related to the frequency of trauma to these extremities, and in consequence it would appear that the skin nutrition in company with edema may be the responsible factor.

In spite of numerous sequelae, employability and economic rehabilitation are common. All 13 of our series were able to engage in productive endeavors. One has limitations imposed by an extremity ulcer which antedated surgery, and another has had to seek a less vigorous occupation than the one he formerly pursued. The overwhelming majority of patients in the series of Burch,[10, 13] Dale,[1] Zollinger[6] and Kirtley[2] have returned to normal activity. Thus, although the majority of such patients have edema, varicosities or pedal discomfort, they have not been prevented from attaining gainful employments of sorts comparable with those at which they were engaged prior to ligation.

SUMMARY AND CONCLUSIONS

Inferior vena cava ligation is a safe and thoroughly effective method for the control of recurrent pulmonary emboli in instances where anticoagulant therapy has failed, is contraindicated or is known to be ineffective. Edema is the most striking postoperative complication. Although present in the majority of patients, it is seldom severe, it is greatest at the end of the day, and it tends to improve with time.

Edema is related in some degree to the preoperative status of the extremities, being most common with preexisting phlebitis and least common with vascular thrombosis in the pelvis. In this series, edema was even more closely allied to the development of certain other disease states known to have an adverse effect upon the peripheral circulation.

There is no good correlation between preoperative vascular disease and the development of varicosities, which are nearly as common a sequela as is edema. However, a close relationship does exist between developing varicosities and discomfort in the limbs postoperatively. The performance of simultaneous or subsequent lumbar sympathectomy affords no protection against the development of these complications.

Certain skin changes, including ulceration, may appear from time to time, but they either are of no major concern or respond nicely to treatment.

Complete economic rehabilitation is, in spite of the frequent complications, a general rule. Fear of disabling sequelae is not well grounded, and should never deter the performance of inferior vena cava ligation when suitable indications exist. One should bear in mind that the patient with multiple pulmonary emboli seldom fulfills the criteria of a "good risk."

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Northeast Iowa Clinical Conference

The Northeast Iowa Clinical Conference will be held at the Masonic Temple, in Waterloo, on October 20, and physicians from throughout the state are cordially invited to attend. The program is sponsored by the Black Hawk County Medical Society, in cooperation with the Iowa Division of the American Cancer Society, and the Iowa Heart Association.

Plans are not as yet altogether complete, but the following schedule will be followed:

9:00 a.m. REGISTRATION (No registration fee. Coffee and doughnuts will be served at this time.)
10:00 SPEAKERS AND DISCUSSION PERIODS
12:00 m. LUNCHEON—Elks Club
1:30 p.m. SPEAKERS AND DISCUSSION PERIODS
6:00 SOCIAL HOUR—Sponsored by Waterloo pharmacists
7:00 BANQUET—Followed by entertainment and dancing

The speakers and topics will include the following:

Dr. David Hoffman, consultant in endocrinology at the Mayo Clinic and Foundation: "Treatment of Thyroid Disease by Radioactive I_2."

Dr. George Griffith, professor of medicine and cardiologist at the University of Southern California: "Management of Complications of Myocardial Infarction."

Dr. William Stromberg, associate professor of surgery at Northwestern University and attending surgeon at Passavant and Cook County Hospitals: "Treatment of Burns of the Extremities."

Dr. W. Hugh Missildine, clinical professor of child psychiatry at Ohio State University and editor of FEELINGS: "Family Emotional Balance."

In addition, two other speakers are being engaged, one an obstetrician and gynecologist, and the other an orthopedic surgeon.

The Auxiliary to the Black Hawk County Medical Society is arranging a luncheon and entertainment for the wives of doctors who attend the sessions, and the ladies will of course be most welcome at the banquet and subsequent entertainment.

Clinicopathologic Conference

Mercy Hospital, Des Moines

CLINICAL HISTORY

A 40-YEAR-OLD WHITE MALE was admitted to Mercy Hospital on January 22, 1960, with the chief complaint of upper abdominal pain and nausea. He had been in apparent good health until two weeks prior to admission, except for intermittent episodes of upper abdominal distress three years previously, at which time gastrointestinal x-rays had revealed the presence of an early duodenal ulcer which was treated with diet and medication with prompt relief, and there was no recurrence. Two weeks prior to admission the patient experienced rather sudden onset of severe nausea and steadfastly denied the presence of burning or gnawing. However, he had been unable to eat because of the nausea. There was no history of vomiting or hematemesis. There was no associated fever. His bowel movements had been unchanged. He was treated symptomatically for four to five days prior to admission with no relief. There had been an associated four pound weight loss attributed by the patient to his inability to eat. There was no history of melena, bloody stools, dysphagia or change in the stool character. There had been some gaseous distention of the upper abdomen and eructation. On one occasion he had vomited a whitish material.

At the age of 12 the patient had suffered severe burns to the right leg which had subsequently been treated with skin graft. The patient denied all abnormal symptoms in a complete system review. Specifically, he denied headache, visual difficulty, dyspnea, cough or wheezes, jaundice, excessive alcoholic intake, use of vitamins or drug preparations, musculoskeletal disease, tetany, asthenia, skin disease or known urologic disease of any type.

Physical Examination: Physical examination revealed a well-developed, stocky, overweight male in no apparent distress. He appeared to be somewhat oversedated. His color was normal. The patient was in a recumbent position. There was no evidence of dyspnea and he moved about well. The chest was quite hairy. The head, scalp and hair were negative. The ears were negative. The sclerae and conjunctivae were clear. The pupils were round and equal, and reacted equally to light and accommodation. The fundi were not remarkable. The nose, mouth, gums and teeth were negative. The veins were negative. There was no adenopathy. The thyroid was negative. There was good expansion of the chest. The lungs were normal to percussion, auscultation and pectoriloquy. The breasts were negative. The heart was not enlarged. Its rhythm was regular. The tones were of good intensity, and there were no audible murmurs. The blood pressure was 100/64 mm. Hg. The vessels were normal, and the veins were negative. The abdomen was rounded and soft. The muscle tones were good. Tenderness to pressure was present throughout the epigastrium. No definite masses were palpable. The solid viscera were not palpable. There was questionable left costovertebral angle tenderness. The extremities were normal except for palmar and finger pallor. The joints were negative. There was no edema. The reflexes were active and equal. There was no evidence of hyper-irritability. No pathologic reflexes were demonstrated. The finger-nose test was normal. There was no abnormal lymphadenopathy. The skin was negative except for the large scar over the right lower leg, the site of the previous burn, with evidence of small skin grafts.

LABORATORY STUDIES

Urinalysis: (1-22-60) Acid reaction; yellow color; specific gravity, 1.025; albumin, negative; sugar, negative; occasional white blood cells. (1-29-60) Alkaline reaction, dark-yellow color; specific gravity, 1.012; albumin, negative; sugar, negative; occasional white cell present.

Erythrocyte Sedimentation Rate: (1-22-60) 1 mm. per hr.

Calcium: (1-22-60) 7.7 mg. per cent; (2-1-60) 6.8 mg. per cent; (2-7-60) 7.3 mg. per cent.

Hemogram: (1-22-60) Hemoglobin, 15.1 Gm. or 98 per cent; red blood cells, 4,815,000, cu. mm.; white blood cells, 8,300, cu. mm.; microhematocrit, 45 volumes per cent; differential of 57 per cent neutrophils, 24 per cent lymphocytes, 12 per cent eosinophils and 7 per cent monocytes.

Urinalysis: (2-22-60) Acid reaction; yellow color; specific gravity, 1.025; albumin, negative; sugar, negative; occasional white blood cells. (1-29-60) Alkaline reaction; dark yellow color; specific gravity, 1.012; albumin, negative; sugar, negative; occasional white blood cells.

Sedimentation Rate: (1-22-60) 1 mm hr.

Calcium: (1-22-60) 7.7 mg. per cent; (2-1-60) 6.8 mg. per cent; (2-7-60) 7.3 mg. per cent. White blood cells 8,300, cu. mm.; microhematocrit, 45 volumes per cent; differential of 57 per cent neutrophils, 24 per cent lymphocytes, 12 per cent eosinophils, and 7 per cent monocytes.

Semi-quantitative Determination: (1-23-60) Mercury, negative; arsenic, negative.

Blood Urea Nitrogen: (1-25-60) 10.4 mg. per cent.

Gastric Secretions for Free Acid: (1-25-60) No free acid present.

Phosphorus: (1-25-60) 3.3 mg. per cent.
Phosphatase: (1-27-60) 5.2 units.
Glucose, Fasting: (1-29-60) 81 mg. per cent; 12:30 p.m.—132 mg. per cent.
Total Cholesterol: (1-29-60) 127 mg. per cent.
Amylase: (1-29-60) 37 units.
Total Protein: (1-28-60) 2.9 Gm. per cent; albumin, 1.9; globulin, 1.0; A/G ratio, 1.9 to 1.
Gastric Analysis: (1-29-60) Fasting, free HCl, 0°; total HCl, 15°; after test meal, free HCl, 0°; total HCl, 25°.
Sulkewitch: (1-29-60) Urine—No precipitate; amylase, 7 units.
Serum Lipase: (1-30-60) 0.65 units.
Thymol Turbidity: (2-1-60) .75 units.
Total Protein: (2-1-60) 3.65 Gm. per cent; albumin, 2.45 Gm. per cent; globulin, 1.20 Gm. per cent; A G ratio, 2 to 1.
Congo Red Test: (2-1-60) 14 per cent dye absorbed in one hour.
PPD No. 1. 0.1 cc. left forearm: (2-3-60) Negative on 2-5-60; histoplasmin, 0.1 cc., negative.
PPD No. 2. 0.1 cc. ID left forearm (2-6-60): Negative on 2-8-60.
Lactic Dehydrogenase: (2-10-60) 24 seconds; 24.5 per cent; control, 13 seconds.
Electrocardiogram: (1-28-60) Normal.

X-RAY STUDIES

Upper GI: (1-27-60) "Fluoroscopic examination of the chest shows the heart and lungs to be essentially normal. Fluoroscopic and radiographic examination of the upper GI tract shows again a marked abnormal mucosal pattern of the entire gastric mucosa with areas of what appear to be penetrating ulcers throughout the stomach, marked hypertrophy of rugal folds throughout; however, peristalsis is apparent. The hour film shows satisfactory emptying, with rapid transition of the barium through the small intestinal tract."
Upper GI: (2-4-60) "Re-examination of the upper gastrointestinal tract shows again the marked peculiar pattern of the gastric mucosa, with what appears to be more nodularity than on the previous examination. The pseudo-diverticula are not as much in evidence, but the entire gastric mucosa has a hobnailed appearance."
Chest: (1-23-60) "Examination reveals the heart shadow normal. Hilar shadows are broad and dense. Lung fields are clear, with the exception of minor haziness in the right base laterally which might well be due to pleural thickening."
Gallbladder: (2-6-60) "X-ray studies of the right upper quadrant following oral administration of gross filling defects."

CLINICAL COURSE

Following admission, an attempt was made to determine the etiology of the patient's persistent nausea. For this complaint he received Tigan and chloropromazine with little relief of symptoms. He was quite weak and he remained afebrile. On February 2, radio-iodinated oleic acid was administered, with subsequent determination of its absorption. It was markedly depressed. On February 9 a gastroscopic examination was performed. This revealed some loss of normal rugal folds, with pallor of the gastric mucosa. The surface was uneven, with a nodular type of irregular bulging of the gastric wall. On February 11, the patient had an acute episode of lower-abdominal cramping pain which cleared spontaneously. The marked depression in serum proteins was noted, and cortisone therapy was instituted with the hope of improving his general condition. He seemed to improve somewhat on steroid therapy. Early on February 16, 1960, he complained of shortness of breath and a feeling of nausea. At the time he complained of no pain. His color was pale. Cyanosis was evident. Nasal oxygen was instituted. Examination of the chest at this time revealed it to be clear. The pulse was weak, and the apical rate was 100 per minute. He belched at frequent intervals. There was a steady depression in his blood pressure. The patient expired at 4:00 a.m., February 17, 1960, 26 days after admission.

CLINICAL DISCUSSION

Dr. William J. Morrissey, internist: We are discussing a 40-year-old, white male, who had only a few complaints. The complaints were nausea, anorexia and upper abdominal distention, and he vomited once. He had a duodenal ulcer approximately four years ago. He had a severe burn on the leg early in his life. I presume his family history is non-contributory. The systemic history revealed nothing of significance.

The physical examination is helpful only in that it is almost normal. The patient was a well-developed, stocky, overweight male. He had tenderness in the epigastrium. He had questionable tenderness in the left costovertebral angle. He had pallor of the palms of the hand and fingers. His skin was normal in color, moisture and temperature. Apparently he had no tremor of the fingers or thumb.

At this time, I would make a tentative diagnosis of duodenal ulcer, considering his past history, age and complaints. I would be inclined to rule out a malignancy of the stomach, acute or chronic pancreatitis, urologic disease, diabetes mellitus, syphilis, tuberculosis, biliary tract disease, hiatus hernia, and liver disease. The last three occupy second, third and fourth place on the basis of probabilities in the differential diagnosis.

From the laboratory standpoint, there are hypocalcemia, eosinophilia, monocytosis, depressed total cholesterol, depressed amylase, hypoproteinemia, achlorhydria, increased prothrombin time, and increased fat in the stool. In addition to these, the radio-iodinated oleic acid test was done, and the absorption was found to be markedly de-

pressed. Also lactic dehydrogenase was 350 units, which is in the upper limits of normal.

Radiologic examination included chest x-rays and a complete gastrointestinal series. All were normal, with the exception of the stomach which was quite irregular and revealed multiple filling defects.

Disease of the urological system might be indicated by the hypocalcemia, the hypoproteinemia, hypocholesterolemia, and some of his signs and symptoms. But, his BUN was normal, his urinalysis was normal, and he was able to concentrate to specific gravity of 1.025 and to dilute or concentrate it (as the case may be) to a specific gravity of 1.012. Thus, I would eliminate this system as the site of the disease.

Another possibility is steatorrhea, which may be associated with hypocalcemia, hypoproteinemia, hypocholesterolemia and increased prothrombin time. Depending upon the cause of steatorrhea, the patient may also have depressed serum and urinary amylase, and depressed or absent gastric hydrochloric acid. These findings, with the depressed absorption of radio-iodinated oleic acid, would point to pancreatic insufficiency. When there is a depressed radio-iodinated oleic acid absorption, it may be for two reasons: (1) pancreatic insufficiency, or (2) malabsorption in the intestinal tract. Since there is also a depression of amylase in the serum, I think that it was probably due to pancreatic insufficiency.

The x-ray findings in the gastrointestinal tract cannot be ignored. There is a form of Hodgkin's disease of the stomach in which the entire stomach is involved as in a polyposis of the stomach. Lymphosarcoma of the stomach may also be generalized to produce bizarre defects in the stomach. The radiological description in this case would be compatible with either of these lesions. It would seem certain that the stomach and the pancreas are involved in this disease process. In addition to the prothrombin time, protein level, and cholesterol determinations, another liver function test was performed, the thymol turbidity test, and it was normal. The liver could be much involved, however, and still show normal liver function tests. In Ackerman and del Regato's book on cancer it is stated that Hodgkin's involvement of the liver rarely increases the size of the organ; so, on examination it probably wouldn't be palpable. In Hodgkin's disease of the spleen, however, the spleen is usually increased in size. Hodgkin's disease of the liver might account for the left costovertebral angle tenderness. The patient was obese, and consequently palpation of the abdomen was doubtless difficult.

Some common poisons have been ruled out. The blood sugar levels were normal, eliminating diabetes or islet cell tumor of the pancreas as possibilities. The Congo Red test was normal, ruling out amyloidosis. There was no evidence of tuberculosis. Absence of jaundice and negative x-rays of the gallbladder reasonably clearly eliminated biliary tract disease. Syphilis can produce all these symptoms, but I do not believe that it was the culprit, although I see no record of a serological test. Carcinoma of the stomach may spread extensively, and occasionally it is without ulceration. This form may give these x-ray and gastroscopic findings.

In spite of the normal temperature, normal sedimentation rate, the lack of palpable nodes, the lassitude, weight loss and anemia, I believe this man probably had Hodgkin's disease. It may be a fast-developing disease, with early visceral manifestations. The absence of signs and symptoms can be explained because these signs and symptoms usually occur when the disease becomes more disseminated. I believe that his demise came earlier than one would expect in the normal course of the disease. I don't know why he died, but it seems that his death possibly could have been from a massive gastrointestinal hemorrhage, or he might have died from adrenocortical insufficiency, since he did not seem to benefit from cortisone administration. There apparently is such a thing as pancreatic apoplexy. Of what it consists, I don't know, but it is said in the medical literature that people die of it.

To summarize this, I would say that the patient had disease of the pancreas and disease of the stomach, he could have had liver disease, and I believe that the primary disease was Hodgkin's disease.

Dr. F. C. Coleman, pathologist: Thank you, Dr. Morrissey. Dr. Irving, would you like to present the x-rays on this patient?

Dr. Noble W. Irving, radiologist: This patient was seen in January of this year. At that time, his x-ray examination revealed a bizarre pattern in the stomach. The films on your right are representative of that examination and subsequent examinations. The film on the left is the one that was taken in 1955 at which time his complaints were those of duodenal ulcer. On the original examination in 1955 the bulb was deformed, he had a small amount of prolapse of the gastric mucosa, and radiologically it was apparent that he had a duodenal ulcer. The stomach itself had a normal pattern.

Some four and one-half years later, he came in with the complaints that you have discussed today. At that time his stomach showed an abnormal mucosal pattern. We couldn't find normal rugae anywhere within the stomach. We had the problem of differentiating between filling defects within the stomach due to penetrating multiple ulcerations, and a markedly hypertrophied rugal pattern with deep folds in which many ulcerations might be found. The pattern that we saw was more or less typical of what is called a hobnail mucosal pattern. This is indicative of a very severe gas-

tritis, and it is also seen with Hodgkin's disease of the stomach. A later examination was done, and at that time there appeared to be some improvement in the pattern in that the penetrating ulcers or deep crevices within the stomach were not so prominent, but the mucosal pattern again was mosaic and bizarre. At that time the peristaltic activity throughout the stomach was good. This peristalsis would suggest, therefore, that the lesion probably was not infiltrating the muscular layers of the stomach, but involved primarily the mucosa. Thus, this would lead one to consider a gastritis, although Hodgkins' disease could not be entirely eliminated.

This x-ray pattern also brings to mind other things. One that was considered was tuberculosis of the stomach. For this reason a small intestinal examination was done, and the small intestinal pattern was normal. As you may recall, in tuberculosis of the gastrointestinal tract radiographically or radiologically one sees much pooling of the barium within the small intestine, with alternate areas of constriction and dilatation and loss of mucosal pattern with some ulceration. This was not present in the small intestinal tract in this individual. Also, as you know, tuberculosis may involve the colon, and the colon examination was normal. So, it was recommended then that a gastroscopic examination be done for the purpose of differentiating between an acute gastritis or Hodgkin's disease.



Figure 1. Demonstrates the marked hypertrophy of the rugal folds in the area of the fundus of the stomach. The lesser curvature exhibits deep penetration of the barium into the mucosal folds.

Dr. Coleman: Thank you, Dr. Irving.

Dr. Morrissey, after viewing the x-rays would you care to comment further?

Dr. Morrissey: My only other comment is that I believe many of the man's symptoms were due to pancreatic disease. I can't explain purely pancreatic disease's causing this lesion in his stomach, or to look at it the other way, can't explain a disease of the stomach's causing pancreatic disease.

Dr. Coleman: Does anyone else wish to offer a diagnosis?

Dr. Pedro Ramos, interne: A tumor of the pancreas may be associated with ulcers in the stomach, and the clinical picture of this patient, for me, is indicative of a primary lesion in the pancreas.

Dr. Coleman: Are you thinking of a carcinoma of the pancreas?

Dr. Ramos: No, a lymphosarcoma of the pancreas.

Dr. Coleman: We shall add a primary pancreatic lesion to the list of diagnoses. Are there others?

Dr. Divaldo Guerra, interne: Because of the eosinophilia, I would like to add echinococcosis disease, involving the liver.

AUTOPSY FINDINGS

Dr. Coleman: This man was autopsied approximately 4½ hours after death. His height was estimated at 68.5 inches, and his weight at approximately 170 pounds. Examination of the external surface of the body was essentially negative, except for the scarring of the right leg as a result of the burns sustained when this individual was about 12 years of age. The internal examination of the body was likewise essentially negative. When I speak of the internal examination, I am speaking of the examination of the panniculus adiposus and the peritoneal and pleural cavities.

The heart weighed approximately 410 Gm., no valvular lesions were noted, and although the heart was dilated, no significant changes were observed in the myocardium.

The lungs were of slightly increased weight, and both showed marked atelectasis, especially of the lower lobes, together with pulmonary edema.

The liver was enlarged, weighing approximately 2,600 Gm. (The normal weight of the liver for an individual of this size is somewhere between 1,600 and 1,800 Gm.) There was a lesion on the inferior surface of the left lobe which resembled a hemangioma. The spleen was also enlarged, weighing 330 grams, and an accessory spleen was noted at the hilus of the spleen. The adrenal

glands were normal in size and appearance. There was mild dilatation of the pelvis and calyces of the right kidney. There was a small amount of purulent exudate in the pelvis of the left kidney. No lesions of the urinary bladder or the prostate gland were noted. The pancreas likewise was of normal appearance.

The principal lesions were observed in the gastrointestinal tract. The esophagus was of normal appearance, but the stomach was dilated to between two and three times normal size, and numerous coarse folds were palpable through the stomach wall. When the stomach was opened, a characteristic picture of giant hypertrophic gastritis was present, with marked accentuation of the rugal folds of the stomach. In the pyloric portion of the stomach, the hypertrophic rugal folds also showed multiple nodularity, with pseudopolyp formation.

Microscopic examination of the thoracic and abdominal viscera revealed no significant lesions that had not been observed grossly. There were focal areas of myocardial fibrosis, and there was one small focal area of myocarditis. The sections of the lung revealed atelectasis and moderate pulmonary edema. Microscopically, the liver revealed passive congestion, and sections through the hemangioma were typical of a benign hemangioma of the liver. Sections of the adrenal glands were not significant, nor were the lesions of the kidney outstanding. Sections of the pancreas likewise were normal, and thus we can conclude that there was no significant pancreatic disease.

The sections of the stomach, however, were quite interesting. I believe that we can demonstrate the lesions of the stomach by showing you the gross and microscopic findings with photographs. This gross photograph of the stomach reveals the marked accentuation of the rugal folds of the stomach. This rugal hypertrophy involves the entire stomach, with the exception of the fundus portion. In the pyloric portion, are the nodular thickenings referred to earlier. These are not true polyps, but are pseudopolyps. Ulceration is not evident in this specimen, although ulcerations in giant hypertrophic gastritis are quite common, and when present, they may be the source of massive hemorrhage.

In this photograph of the ileocecal region, are multiple hyperplastic lymphoid nodules. This is the ileocecal valve, and this is the ileum. Can you see these small rather discreet nodules? These are hyperplastic lymphoid nodules in the terminal ileum. I point them out because this patient obviously had a malabsorption syndrome which must be due in part to involvement of the gastrointestinal tract, rather than of the stomach, and it is possible that those changes observed in the lower portion of the small bowel may have contributed to the malabsorption syndrome.

This microphotograph of the stomach mucosa



Figure 2. Shows the stomach partially filled with barium, which better demonstrates the irregular mucosal pattern with many areas of pseudo-ulceration.

(Figure 3) reveals the marked thickening of the mucosa which exists in giant hypertrophic gastritis. The mucosa may be two to five times the normal thickness, and an inflammatory component is frequently present. Inflammatory cells are noted in this area. These inflammatory cells are polymorphonucleccytes, eosinophils, and plasma cells.

The changes in the glandular structure of the gastric mucosa are quite outstanding and quite interesting. Instead of the usual morphology of the gastric glands which are lined by the chief cells which are the source of pepsin, and the parietal cells which are the source of hydrochloric acid, these cells have been replaced to a considerable extent by mucous secreting cells which resemble those lining the glands of the small bowel. We see this very well demonstrated in this photomicrograph.

This is a photomicrograph of the hemangioma of the liver which reveals liver tissue and the vascular spaces that are filled with blood.

This photomicrograph of the lung shows areas of atelectasis and pulmonary edema, with mild extravasation of red cells into the pulmonary alveoli.

To summarize the autopsy findings in this patient, there are a marked lesion of the stomach, a minor lesion of the small bowel, cardiac dilatation, pulmonary atelectasis and pulmonary edema.

We don't have a good explanation as to why the patient died. It is our impression, however, that this man was suffering from a rather severe malabsorption syndrome. Part of the malabsorption was produced by the gastric lesion, and part of it was probably due to malfunction of the small bowel.

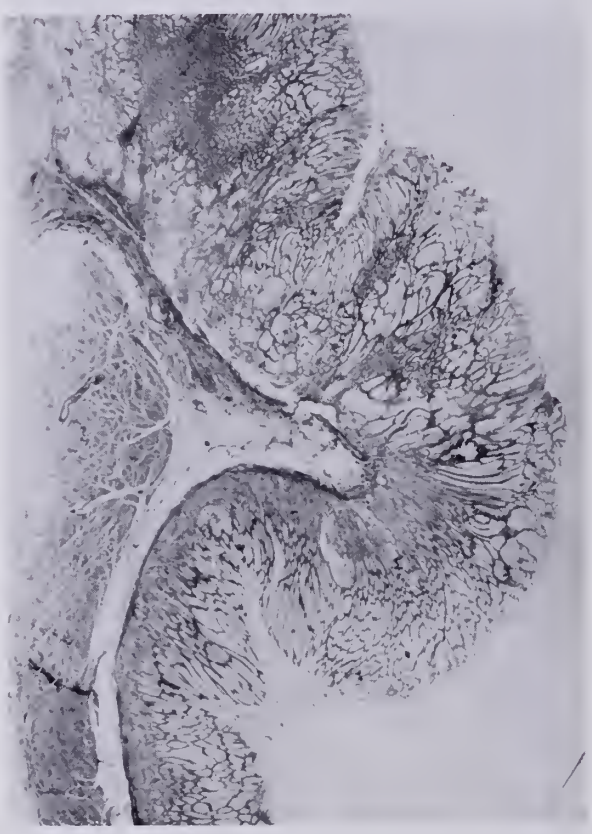


Figure 3. Photomicrograph of stomach, showing massive hypertrophy of mucosa.

What role the lymphoid hyperplasia played, we are not prepared to say. It is quite significant, however, that this man showed the characteristic hypoproteinemia which is found in chronic hypertrophic gastritis. More than 50 per cent of cases of chronic hypertrophic gastritis show a marked reduction in the serum protein.

There have been a number of explanations offered as to why this happens, and I refer to an article in the NEW ENGLAND JOURNAL OF MEDICINE (Vol. 257, No. 7, 1957, p. 906-912), entitled "The Mechanism of Hypoproteinemia Associated With Giant Hypertrophy of the Gastric Mucosa" by Citrin, *et al.* Citrin's conclusion was that hypoproteinemia is due to a loss of serum protein into the gastric contents with much more active secretion of serum protein into the gastric juice than is present in a normal individual. He also showed that there is reduction in the total exchangeable albumin pool. In one of the cases, he reported the total exchangeable albumin pool was 122 Gm., and the normal is approximately 360 Gm.

Another theory as to the cause of the hypoproteinemia is that (1) the gastric lesion, in some way, interferes with the synthesis of albumin and globulin. As in the case today, the decrease in serum protein usually involves both albumin and globulin in about the same degree, so that the albumin to globulin ratio remains at approximately normal. The reduction in serum protein is, of course, responsible for the decreased serum calcium level. The serum calcium level is quite dependent upon serum protein because approximately 50 per cent of the serum calcium is bound to the albumin fraction. If there is a reduction in the amount of albumin, then there will be a reduction in the amount of calcium present.

The clinical picture that was observed in this patient is rather characteristic of giant hypertrophic gastritis—if one can say that anything is characteristic of it—but the signs and symptoms of chronic, hypertrophic gastritis are not definitive enough to be pathognomonic. The same signs and symptoms may be observed in chronic peptic ulcer; for example, and radiologically, as Dr. Irving has pointed out, the changes of chronic hypertrophic gastritis are similar to those observed in the malignant lymphoma of either Hodgkin's disease or lymphosarcoma. Most of the cases are diagnosed at the time of exploratory laparotomy.

The mortality rate in this condition is not high, and it is rather puzzling that this patient, a rather hearty, robust man, would die so quickly. There have been a number of cases reported in which patients lived 10 or 11 years after the diagnosis was made and treatment was what might be called minimal. Two of these cases that I especially remember were treated only by gastrotomy. A laparotomy was done, the stomach was opened, a biopsy was taken to confirm the diagnosis microscopically, and then the stomach was closed. These patients were put on dietary management, and they got along well.

The treatment of this condition is controversial —some regard the treatment as surgical, and it is my impression that their reason is that they regard giant hypertrophic gastritis as a pre-cancerous condition. Although there is thus no uniformity of opinion, it would appear that this is *not* a pre-cancerous condition. The disease, therefore, might lend itself quite well to medical management.

Cause of Death: Giant hypertrophic gastritis—complicated by acute myocardial failure.

GENERAL DISCUSSION

Dr. Coleman: Dr. Morrissey, do you wish to comment on the medical management of this condition?

Dr. Morrissey: You put the patients on a bland diet, supplement their protein intake, and supplement their vitamin and mineral intake.

Dr. Steven A. Schwid, interne: Was the colon involved?

Dr. Coleman: No, the lymphoid hyperplasia was evident only in the terminal portion of the ileum.

Dr. Morrissey: I don't know of any medication that would be beneficial.

Dr. Zavier Puig, interne: What is the incidence of giant hypertrophic gastritis?

Dr. Coleman: This is rather an unusual condition. It is said to occur about once in 8,000 cases.

Dr. Julian F. Garcia, interne: What caused the enlarged liver?

Dr. Coleman: The enlarged liver was due to passive congestion, secondary to the cardiac failure.

Dr. Morrissey: What role do you think the low serum protein level played in the edema of the liver and lungs?

Dr. Coleman: The amazing thing is that this patient didn't show peripheral edema as one would expect from the very low serum protein level. There was no significant pedal edema, and there was no significant edema over the pelvis or buttocks.

Dr. Schwid: Will you discuss the decreased absorption of oleic acid?

Dr. Coleman: This man did have a malabsorption syndrome. Both grossly and microscopically the pancreas was normal, and thus it would appear that the failure to absorb oleic acid must have been due to a failure of absorption from the small bowel.

Dr. Morrissey: The achlorhydria fits the picture of a malabsorption syndrome.

Dr. Irving: Will you discuss the fat-absorption test?

Dr. Coleman: When you are doing one of these studies, you first give the Triolein, which acts like a neutral fat. It is tagged with radioactive iodine, and if the absorption of the triolein acid is normal, then you know that the patient's pancreas is functioning properly, and that his gastrointestinal tract is functioning properly, at least as far as the absorption and digestion of fat is concerned. If, however, the absorption of Triolein acid is reduced, then you don't know whether you are dealing with a failure of the pancreas or a failure of the intestinal tract. So you then follow with a fatty acid, oleic acid, and if the oleic acid also is not absorbed, then you know that it is a malabsorption syndrome, and that the gastrointestinal tract is at fault because the oleic acid is not absorbed.

Dr. Theodore Rowan, pathologist: Although hypoproteinemia is common in giant hypertrophic gastritis, it is not usually so severe as it was in this patient. This patient's hypoproteinemia was very severe. In one of the cases reported in the literature, the patient lost 1.5 Gm. per cent of protein in 10 days, which is an extremely rapid loss of protein. One of our patient's readings—his first one when he came in the hospital—was 2.9 total grams of protein, so we know that apart from the demonstration of the fact that he wasn't absorbing well, he certainly had a very low amount of protein.

Associated with this, I wonder if he might not also have had a deficiency in thiamine. Thiamine in the liver and heart is depleted 80 per cent in the course of one week in people who are on a thiamine-deficient diet. This patient's heart was mildly enlarged, and there was one focus of myocarditis noted in it microscopically. These are both findings in patients who die with a beri-beri heart. Obviously, this patient didn't have full blown beri-beri, but the heart was enlarged, there was edema, and there was one focus of myocarditis present. We have the findings of acute congestion of the liver, and change in the lungs to confirm the fact that the man died in acute myocardial failure. It seems to me that we have some evidence, apart from his severe hypoproteinemia, that he suffered an associated deficiency of thiamine which may have contributed to his myocardial insufficiency.

Dr. Coleman: I think that that is an excellent suggestion.

Dr. Irving: Dr. Coleman, one further comment on x-ray findings. The presence of peristalsis in the stomach pretty well rules out involvement of the muscular layers and shows that only the mucosa was involved.

Dr. Coleman: Would you say that the presence of peristalsis would tend to rule out Hodgkin's disease or lymphosarcoma?

Dr. Irving: Yes, I think it would. One other point that I would like to inquire about is whether there was a considerable amount of lymphocytic infiltration in the stomach.

Dr. Coleman: Not a significant amount.

Dr. Irving: I asked that question because if there were lymphoid infiltration, the lesion might be responsive to irradiation.

Dr. Coleman: Some of the cases of giant hypertrophic gastritis show a marked lymphocytic infiltration, but that was not the case in this patient. In fact the lymphocytic infiltration is so marked in some cases that it is difficult to distinguish it from lymphosarcoma.

Dr. Schwid: I wonder whether this diagnosis could have been made had there been a biopsy at the time of gastroscopic examination or whether cytologic studies were done.

Dr. Coleman: Gastric washings would be of little help. There have been a number of studies done on the cytology smears from these patients, and the cytology smears are usually read as either Class I or Class II. As a matter of fact, at the time of autopsy on this patient some cytology smears were made and examined, and they were graded

as Class I. Whether it would be possible to obtain a satisfactory biopsy through a gastroscope or not, I wouldn't be prepared to say.

Dr. Schwid: Was there a history of occult blood in the stool?

Dr. Coleman: No. Again, the absence of blood is a little unusual, for bleeding is very common in these cases.

Dr. Irving: There was a change in the x-ray pattern following the initial examination. In the last x-ray, either there was less ulceration in the rugal folds or those areas that had looked like ulcerations on the early film were not ulcerations.

Dr. Coleman: Do you think that you can look back on the x-rays that were taken four and one-half years ago and see changes there that would suggest giant hypertrophic gastritis?

Dr. Irving: No suggestion at all.

Dr. Leonard Wallace, resident in pathology: If one assumes that the stomach liberates substances that stimulate pancreatic and biliary secretions, I think that this might give us an idea as to why this man had pancreatic dysfunction. The physiology of the stomach was so depressed that he probably had an absolute reduction of the glands that stimulate these secretions of pancreatic and biliary enzymes which might aid in the depression of the absorption in the gastrointestinal tract.

Dr. Coleman: That would certainly be logical, for the physiology of the stomach would be greatly deranged.

Dr. Schwid: In hindsight, I wonder if there might have been a clue when this man vomited whitish material. I wonder whether, if we had been able to collect some of this vomitus or had been able to aspirate the stomach, we might not have found secretory changes that would have been indicative of the diagnosis.

Dr. Coleman: Well, it might have been helpful to the extent that the vomiting of large amounts of mucus is not a usual finding. I have not had enough experience with this condition to be able to offer an authoritative statement on it, but that certainly would be possible.

Dr. Irving: I think one other thing that one has to consider in diagnosing such a lesion as this is the length of time that it was present. I don't know what you found in the literature, but if one saw this picture over some length of time, he might come up with the diagnosis of a benign lesion. Being confronted with the early x-rays, he certainly would have a difficult time proving this not to be a malignant lesion.

Dr. Coleman: An exploratory laparotomy seems to be quite common in these cases because this is the differential that has to be made—malignancy versus a nonmalignant lesion. It is my impression that there are not very many of these cases that are diagnosed as giant hypertrophic gastritis prior to surgery.

LEUKEMIA IN ELDERLY PATIENTS

Nearly half of the fatalities from acute leukemia —once considered primarily a disease of childhood—now occur in patients past the age of 50. Various factors suggest that the disease in this older age group may be a significantly different process from its counterpart in children and young adults, according to an article by Dr. Fernando Rubio, Jr., of St. Petersburg, in the August issue of the JOURNAL OF THE AMERICAN GERIATRICS SOCIETY.

Dr. Rubio reported the results of an 11-month study of 24 patients, all of them past 50, diagnosed and treated for acute leukemia.

The usual symptoms of acute leukemia such as fatigue, pallor, fever, night sweats, anorexia and ecchymoses were present in each patient at one time or another, but in comparison with the manifestations in young adults, those symptoms were insidious rather than pronounced. For that reason, he said, the patients presented difficult diagnostic problems. A decision was reached in each case on the basis of blood and bone-marrow studies.

The white blood cell counts varied considerably, ranging from 2,300 to 784,000/cu. mm., as against a normal of between 5,000 and 10,000/cu. mm. Ten of the 24 patients were leukopenic or subleukemic. In a number of cases "bizarre morphologic abnormalities" were noted both in the peripheral blood and in the bone marrow.

All the patients were hospitalized and treated with prednisone and/or 6-mercaptopurine. In addition, all but two of them received blood transfusions. The mode of treatment did not seem to have any significant effect upon the duration of the illness or upon its ultimate course. No complete remissions developed, regardless of the treatment employed. The disease was rapidly fatal, its duration, from the onset of symptoms, ranging between two weeks and 18 months. Most of the patients lived only about three months. Those who survived longest were leukopenic, and when he wrote the article four of them were living, all belonging to the leukopenics.

The following are Dr. Rubio's conclusions: "The high prevalence of acute leukemia in the elderly, the atypical manifestations of the disease, the peculiar cell types in the blood and bone marrow, and the marked resistance to therapy strongly suggest that acute leukemia in this age group may be a significantly different process from its counterpart in children and young adults. However, the longer survival in patients who are leukopenic seems to be a curious point of similarity, and more knowledge of the mechanism of 'leukopenic' leukemia may prove important. If advancing years *per se* bring about certain changes in cellular metabolism which permit various environmental factors to 'trigger' the leukemic process, further studies of the process of aging may well shed valuable light on the nature of acute leukemia."

State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

THE MALE INFANT who is the subject of this report was the result of a full-term, uncomplicated pregnancy, and of a labor and delivery described as without complication. Soon after birth it was noted that saliva was running from his mouth. When he was given his first feeding, he regurgitated it and had a choking episode. Another feeding was attempted, with a similar result. A working diagnosis of tracheo-esophageal fistula was made, and the infant was referred to this hospital on his second day of life.

An atresia of the esophagus was demonstrated radiographically by the instillation of Dionicol. The roentgenogram revealed that there was gas within the bowel and that both lung fields were clear. Esophageal continuity was established by an end-to-end anastomosis, and a fistulous tract connecting the distal stump and the trachea was divided. The immediate postoperative course was uneventful, but a Lipiodol study on the fourth hospital day demonstrated a small leak at the site of the anastomosis. On the following day, a Stamm gastrostomy was done.

On the seventh postoperative day, the child became cyanotic, and there were grunting respirations. There was radiographic evidence of a pneumothorax and fluid within the right pleural space. Aspiration of the right thorax revealed 40 cc. of air and approximately 2 cc. of saliva. A water-seal drainage tube was inserted, and contamination of the water in the tidal well with saliva debris was noted. During the following two-week period, the infant's course was precarious. There were problems in feeding, diarrhea, and dehydration that required careful intravenous fluid therapy. For a period of several days he had fevers of 101° to 102° F. He had a white count of 17,600/cu. mm., with 37 per cent band polys, 40 per cent segmented polys, 21 per cent lymphocytes and 1 per cent monocytes.

A culture of the material obtained from the chest revealed E. coli, hemolytic Staphylococcus aureus and non-hemolytic Streptococci. The infection was treated with Chloromycetin, 300 mg. daily, and Albamycin, 160 mg. daily. The infant responded to therapy, and three weeks after surgery, the drainage tube was removed. By radiographic examination, it seemed that the leak at the site of the anastomosis had healed, and that right-sided pleural thickening was the only residual evidence of the infection.

Eight weeks after surgery, the patient had the onset of a cough and a low-grade fever. Radiographic studies showed no evidence of obstruction at the site of the anastomosis, but there was again a leak, and there was an empyema on the right side. The empyema was aspirated, and a culture of the empyema fluid grew hemolytic Staphylococcus aureus. Chloromycetin and Albamycin were restarted. During the following days the infant improved. He became afebrile and made a slight weight gain. A retrograde dilatation of the esophagus was done without difficulty.

Nine weeks after surgery, a culture of material obtained from the right pleural cavity grew Proteus vulgaris that was shown to be sensitive to Chloromycetin and streptomycin.

A mass was felt in the lower left quadrant of the abdomen. An intravenous pyelogram was indeterminate for position of the kidney, but it was assumed the mass in the lower abdomen was the kidney.

Ten weeks after surgery, the case was carefully reviewed, and it was decided that there was no indication for surgery or for drainage of the right chest. The medical therapy indicated by the cultures was to be continued.

Twelve weeks after surgery, purulent material began to drain from the old site of the drainage tube. A culture of this material grew Diplococcus pneumoniae, E. coli and Aerobacter aerogenes. On the basis of sensitivity studies, chloramphenicol and tetracycline therapy was given.

The infant responded to therapy, and by 16 weeks after surgery he had increased in weight from 2,975 Gm. at admission to 4,700 Gm. He learned to take oral feedings, but occasional oral suction was required. It was planned to dismiss him when he no longer required skilled nursing care for his feedings.

Eighteen weeks after surgery, the patient had a recurrence of cough and fever, and he refused oral feedings. Radiographic studies revealed a hydropneumothorax on the right. Thirty cubic centimeters of purulent material was aspirated from the chest, and a drainage tube was left in place. A culture of the material grew E. coli and Proteus vulgaris. On the basis of sensitivity studies, chloramphenicol and streptomycin therapy was started.

He had the onset of a profuse watery diarrhea that caused severe dehydration. On one occasion, the serum electrolyte values were: sodium 161 mEq./L.; potassium 5.4 mEq./L.; chlorine 135 mEq./L.; and carbon dioxide content 13 mEq./L. A culture of the stool grew E. coli type 026:B6, and neomycin therapy was given.

After a few days the diarrhea subsided. He was no longer febrile, although small amounts of drainage continued from the empyema. Oral feedings

were again accepted, and some increase in vigor was noted.

On the 143rd hospital day, without apparent cause, the infant had a sudden onset of symptoms suggesting a state of shock. He was known to have been anuric for approximately 20 hours. His serum electrolyte values were: sodium 138 mEq./L.; potassium 7.5 mEq./L.; chlorine 103 mEq./L.; and carbon dioxide 15.2 mEq./L.

He did not respond to therapy that included intravenous fluids and intravenous antibiotics.

Date	*Organism*	*Erythromycin*	*Penicillin*	*Streptomycin*	*Tetracycline*	*Chloromycetin*	*Albamycin*	*Neomycin*
1-13-59	Hemolytic Staphylococcus aureus							
	Nonhemolytic Streptococcus							
	Escherichia coli							
1-27-59	Staphylococcus epidermidis	R*	R	R	R	R	S**	
	Aerobacter aerogenes			R	S	R		
	Proteus vulgaris			S	R	S		
2- 9-59	Hemolytic Staphylococcus aureus	S	R	R	R	S		
2-10-59	Hemolytic Staphylococcus aureus							
	Proteus vulgaris							
2-13-59	Escherichia coli			S	S	S		
	Proteus vulgaris			S	R	R		
2-23-59	Hemolytic Staphylococcus aureus	Unable to isolate						
	Proteus vulgaris			S	R	R		
2-28-59	Proteus vulgaris			S	R	S		
3-18-59	Proteus vulgaris			S	R	R		
	Hemolytic gram positive cocci	Unable to isolate						
3-31-59	Diplococcus pneumoniae		S	S	S	S		
	Escherichia coli			S	S	R		
	Aerobacter aerogenes			R	R	S		
4- 2-59	Escherichia coli—type 026:B6			R	R	R		S
4-29-59	Escherichia coli			R	R	S		
5- 6-59	Beta hemolytic Streptococcus		S	S	S	S		
5-12-59	Escherichia coli			S	S	S		
	Proteus vulgaris			S	R	S		
5-19-59	Hemolytic Staphylococcus aureus							
	Escherichia coli							
	Proteus vulgaris							
	Pseudomonas aeruginosa							

* R=resistant
** S=sensitive

SUMMARY OF CLINICAL DISCUSSION

Dr. John C. MacQueen, Pediatrics: Mr. Schwaegler will present an analysis of this patient's problem prepared by a group of our junior medical students.

Robert Schwaegler, Junior Medical Student: The history of choking and regurgitation of feedings, plus the x-ray findings of esophageal atresia and air in the gastrointestinal tract, suggests esophageal atresia in this patient. This configuration is the most common type, where the distal end of the esophagus is connected with the trachea. The surgical treatment consisted of an end-to-end anastomosis of the esophagus and closure of the fistula.

The subsequent postoperative course was complicated by a leak through the esophageal anastomosis, as proved by x-rays. Hydropneumothorax was produced by air and saliva from the esophagus. Recurrent empyema was associated with the hydropneumothorax, and was probably due to a hospital-acquired pathogenic E. coli.

Considering the mass in the left lower quadrant which presented itself for the first time nine weeks after surgery, we propose the following possibilities. An abscess may have followed peritoneal contamination from the gastrostomy. An ectopic kidney must be considered, since with one congenital anomaly present, others are more likely. Also, a clinical impression was recorded that this was an ectopic kidney. Reasons why this mass might have been overlooked until nine weeks after surgery would need to be considered if it were congenital. The abdomen became thinner. A kidney infection might have developed, such as a paranephric abscess on the basis of septicemia, or there may have been a progressive hydronephrosis. Because no mention was made of white cells in the urine, we are inclined to rule out paranephric abscess and renal infection. What were the urinary findings during the postoperative course?

The cause of death was probably an empyema perforating through the diaphragm as a catastrophic event producing an overwhelming peritonitis and septicemia, and leading to irreversible shock and death.

We predict that the postmortem findings will show an ectopic kidney in the left lower quadrant, a fistulous tract between the esophagus and the right pleural space, peritonitis, empyema with pleural thickening, and possible pneumonitis and lung abscess.

Dr. MacQueen: There were no urinary findings of importance until the anuria which was a terminal event.

Dr. Robert E. Carter, Pediatrics: This type of tracheo-esophageal fistula occurs in approximately nine-tenths of the cases. The upper end of the esophagus is a hypertrophied blind pouch. The fistula is between the trachea and the distal

esophageal segment which leads into the stomach. The notation ". . . saliva was coming from his mouth" must be stressed as characteristic. It is unfortunate that so many infants with this classical sign of atresia of the esophagus are fed before proper diagnostic procedures are carried out. In the so-called "wet mouth" or saliva-drooling baby on the first or second day of life, there is little excuse for oral feeding until competency and patency of the esophagus have been established.

There are few comments we can make on the difficult surgical problem of correction of tracheo-esophageal fistulas. I think the pleural infection resulted from a failure of the anastomosis, or possibly from a broncho-pleural fistula. In view of the surgical problem, it is a tribute to the surgeons that this happens as infrequently as it does. This was a major infection for the infant, but his response to intensive therapy seemed satisfactory.

I would question the dosage of Chloromycetin employed in this case. At a time when the patient weighed less than 3 Kg., the dosage used was a maximum one. It was a dose that has been associated at this age with a syndrome of shock and sudden death.

When the initial infection cleared, the child seemed to be well for a period of 33 days, according to the sequence in the protocol, but it is uncertain whether there was evidence of residual infection during this time. We are given the impression that his chest was normal, and I am led to feel that there was a second breakdown of the anastomosis, or the reestablishment of a broncho-pleural fistula when the empyema recurred. The possibility of an encapsulated empyema which extended cannot be excluded. From this point on, the child's course was one of major infection in the chest. Response to therapy was never complete, as was evidenced by the repeated drainage from the area where the initial drain was placed in the chest and the repeated culture of fluid material containing bacteria from the pleural cavity.

The mass in the lower left quadrant was, I think, significant for this child. There is no necessary relationship between anomalies of the urinary tract and tracheo-esophageal fistula, yet due to the frequency with which urinary tract anomalies occur in males, there is reason to believe that this child might have had a second major anomaly of the urinary tract. We think of an ectopic kidney, of course, and also of a unilateral multicystic kidney or of the possibility that this could have been a manifestation of polycystic kidney disease. If the kidney was only ectopic, it is surprising that it was not identified earlier, and thus the possibility of an expanding renal mass is raised. I should like to ask Dr. MacQueen whether, on intravenous pyelography, there was evidence of excretory function on the other side. Was there another kidney?

The occurrence of diarrhea due to a proved E. coli serotype known to produce specific diarrheal disease is an unfortunate complication of protracted hospitalization. It is discouraging that a child hospitalized on Pediatrics should contract this type of pathogen. When we consider our migratory population, however, and the large case load carried on the pediatric ward, we think it inevitable that some infants will pick up pathogens under certain circumstances. I do not think this diarrhea had any relationship to the other complications that this child experienced.

We come now to the last portion of this child's life—a time about which we are forced to indulge in considerable speculation. Here, I feel the need for more information as to the specific circumstances surrounding his death. I should like to return once more to the question of the Chloromycetin. If this child were on high doses of Chloromycetin at this time, it would be unusual for him to manifest toxic symptoms, for he was then four months old. However, if we assume impaired renal function, we must consider the possibility that he was not excreting Chloromycetin as he should, and such a failure is the same mechanism that leads to acute toxicity in the neonatal period. In the one case it is due to renal pathology. In the neonate it is due to renal functional immaturity. The patient's terminal period of shock could be explained on this basis.

I think we have to conclude that his death was due to shock, which became irreversible and which resulted from a basic neurological or vascular cause, rather than from blood loss. In other words, this was *primary* shock. The causes of primary shock are numerous and include sepsis with bacterial toxins acting on the blood vessels, toxic chemical compounds, etc. I believe that this child had an overwhelming sepsis from a persistent staphylococcal empyema and pneumonitis, and that this caused his shock. The long history of infection and the clinical signs of empyema make this a more likely possibility than the Chloromycetin discussed above.

One is always concerned in this age group about unrecognized meningitis, and thus we must ask whether the hematogenous spread of infection could have resulted in a terminal meningitis. I am also concerned about adrenal function in these children. An adrenocortical insufficiency might have contributed to the terminal event. I should tend to put this possibility low on my list of possible diagnoses because of the patient's demonstrated ability to maintain a normal serum sodium concentration, however. The potassium of 7.5 mEq./L. cannot be used as a strong argument in favor of adrenocortical insufficiency. We know that in shock the serum potassium rises, and we also know that with prolonged shock there can be acidosis. It is probable that the elevation of the potassium and the mild acidosis were the result of shock.

My final diagnosis is that this child died in irreversible shock, and that the cause of this shock was a severe sepsis. The child had an empyema secondary to persistent bronchopleural fistula. I also feel that this child had a major renal anomaly which contributed in some way to his terminal event.

Dr. MacQueen: It was the impression of the urologist that there was a left pelvic kidney. The amount of chloramphenicol ordered initially was 100 mg. q. 6 hrs. However, during the last few hours of life, large doses were given in the intravenous fluids—one dose of 200 mg. and one of 500 mg. The exact times when these were given would be difficult to establish from the record. The culture—that is, the last culture referred to in the protocol—was taken on the day prior to death. Dr. Gillies, could you tell us the x-ray findings in this case?

Dr. Carl L. Gillies, Radiology: These are a few samples of the x-rays taken during the child's illness. The two films on the right are of the esophagus, and demonstrate the esophageal pleural fistula. The streak of opaque material you see is extending into the pleural space. The second film demonstrates an adequate lumen of the esophagus, and we know that there was a fistula present. The third film was taken on the day following the operation. The right lung reexpanded, and there was no pneumothorax at that time. The following films were taken at monthly intervals. We have additional films that were taken in between. All show the empyema on the right side.

Dr. MacQueen: Dr. Layton, would you please present the pathological findings?

Dr. Jack M. Layton, Pathology: At autopsy, the gastrostomy stoma in the left upper quadrant of the abdomen was patent. The repaired tracheoesophageal fistula was healing, although an ulcer was present in the esophagus at the site of narrowing opposite the tracheal bifurcation.

Malrotation of the gut was found, with the cecum in the left upper quadrant and most of the colon in the left side of the peritoneal cavity. The sigmoid colon, though, was displaced to the right, owing to a mass at the left brim of the pelvis.

No organs were found in the regions usually occupied by the kidneys. The mass at the left pelvic brim proved to be a solitary, spherical kidney which weighed 50 Gm.—equal to the usual combined renal weight in an infant of this age. The lone renal artery arose from the bifurcation of the aorta—a trifurcation. The single ureter entered the left side of the urinary bladder, and the right half of the trigone and the right ureter were missing. Both adrenal glands were found in the usual regions.

The cut section of the kidney presented dark brown medullary rays, with a pale, swollen cortex in which irregular, serpiginous, soft, yellow-tan areas stood out. These areas disclosed massive hydropic degeneration and coagulation necrosis of the tubules. Diffuse lymphocytic and histiocytic infiltration was noted in these areas. Glomeruli were hypercellular, with large mononuclear cells in glomerular spaces. Many glomeruli were engorged, and others contained irregular masses of Schiff-positive material. Scattered afferent arterioles contained fibrin thrombi, and many arterioles had subintimal Schiff-positive material.

From the gastroduodenal junction to the ileocecal valve, the small intestine was thick, swollen and reddish-brown, with irregular ulcers and extravasations of blood in the mucosa and in the wall. The lumen contained a small amount of bloody material.

A right anterior thoracotomy wound was well healed. A drainage tube in the right hemithorax was open. The right pleural cavity was obliterated by dense fibrous adhesions; and in the region of the drainage tube, there was a thick, yellow-green, slightly adherent membrane, but fluid was essentially absent. The left pleural cavity was not unusual.

The right and left lungs each weighed 60 Gm. (normal, 37 Gm.), and a thick mat of organizing granulation tissue was seen on the right visceral pleura, with mild organizing pneumonitis in subadjacent parenchyma.

The liver and the spleen were both enlarged about 1½ times. Mild degenerative changes were noted in the liver, and hemosiderosis in the spleen.

Escherichia coli were cultivated from the spleen, ascitic fluid and right lung.

Death had been due to renal insufficiency secondary to massive renal cortical necrosis in a solitary kidney. It seems probable that the renal cortical necrosis was associated with generalized Shwartzman reaction.

Dr. Carter: I am a bit confused about the time sequence. According to the protocol, the Chloromycetin was given after the infant had developed these symptoms of shock. Is it still possible that the massive doses given after the infant had developed his shock-like state contributed to the pathologic reaction which has been described?

Dr. Layton: There is some disagreement about that point. We don't seem to be able to establish the exact time relationship. It is my understanding that the child showed a mild diarrhea at the time the Chloromycetin was given. I understood that the culture revealed E. coli sensitive to Chloromycetin, and that the drug was given on the basis of that report, but that the child hadn't developed severe diarrhea as yet. Consequently, I hedged a little bit on this possibility.

Dr. Ian Maclean Smith, Internal Medicine: You mentioned the hemorrhagic death. Isn't it true that in E. coli septicemia hemorrhage and shock occur? I wonder whether it isn't possible that a Shwartzman-like reaction occurred in the kidney.

Dr. Layton: Hemorrhage into the bowel does occur in cases of E. coli septicemia, but it usually isn't so diffuse as this. It is a more focal involvement than massive hemorrhage. Dr. Porter may talk about the cultures, and it may be that there is another pathogen which was also associated with hemorrhage into the gut.

Would you repeat the second part of your question?

Dr. Smith: I just thought that in some cases of E. coli septicemia there is a renal shut down.

Dr. Layton: Yes, and that is supposed to be due to the generalized Shwartzman reaction. There is no generally accepted and satisfactory explanation for bilateral renal cortical necrosis, and that is the essential lesion we are dealing with here, except that, owing to maldevelopment, the lesion involved a solitary kidney. In this particular case, we postulate that the findings are consistent with the so-called generalized Shwartzman reaction. The patient was probably conditioned by the persisting gram-negative bacterial infection. With the administration of large doses of Chloromycetin, there was massive destruction of these bacilli, with liberation of endotoxin and onset of the generalized Shwartzman reaction as manifested in the kidney by fibrinoid necrosis of vessels, massive cortical necrosis and death.

Dr. MacQueen: I'll admit that the protocol isn't helpful about the time sequence of severe diarrhea and medication. Throughout his hospital stay, the patient had repeated bouts of diarrhea. These were attributed to E. coli that were sensitive to neomycin, but the diarrhea didn't respond very well to that therapy. The earlier bouts of diarrhea didn't seem to be a major problem and so weren't included in the protocol.

Dr. Wallace W. McCrory, Pediatrics: The comments about the likelihood of a generalized Shwartzman reaction are particularly interesting. In looking over this chart yesterday, I found that the infant lost something like 5 or 10 per cent of his body weight in the week preceding his death. This, coupled with increased stooling, would suggest that the intensity of his diarrhea was increasing in the few days prior to his demise. As I remember, Chloromycetin was not administered prior to the sudden episode of shock. I think the timing is of importance because it is my impression that one can induce the equivalent of a Shwartzman reaction in experimental animals by means of a number of non-specific procedures such as the injection of colloidal particles, thus producing so-called "sludging of the blood." Circulatory collapse alone would have predisposed this infant to occlusion of his renal vessels during a period of shock. If shock coincided with the occurrence of sepsis, it would have been even more likely to produce renal cortical necrosis. It may not be necessary, then, to attribute the renal lesions to a Shwartzman reaction secondary to the destruction of E. coli by Chloromycetin and the liberation of toxin.

I should like to ask whether there were any other Shwartzman-like lesions besides those seen in the kidney. Was this really a Shwartzman reaction?

Dr. Layton: The evidence of a drop in weight during this period perhaps suggested that the child was not eating well. He did have fever, and any infection with fever is apt to depress production of gastric acid and gastric and pancreatic enzymes, which ordinarily inhibit the growth of E. coli in the upper portion of the small intestine. E. coli growing profusely in the upper gastrointestinal tract may have led to the diarrhea. Owing to the presence of large numbers of E. coli in the upper intestinal tract when the Chloromycetin was given, there may have been massive destruction of organisms, with the liberation of endotoxin. Thus, Dr. McCrory's remarks may fit better with the generalized Shwartzman reaction than I thought at first.

The most characteristic gross lesion of the generalized Shwartzman reaction is renal cortical necrosis. Other lesions occur with less constancy, and they may be enhanced by the use of certain high molecular weight acidic polymers in association with the endotoxin.

Dr. MacQueen: Dr. Culp, do you have any comments to make regarding the renal complication?

Dr. David A. Culp, Urology: I should like to emphasize the value of excretory urograms in patients with abdominal masses. Generally, the relationship of the mass to the urinary tract can easily be established by excretory or retrograde pyelography. Those masses arising in the retroperitoneal space, but not from the kidney, may displace or distort the kidney or ureter, whereas masses arising from intraperitoneal structures generally do not affect the kidney or the course of the ureter. Likewise, when the mass originates from the kidney, as in the case under discussion, the excretory urograms will exhibit changes in the pattern of the calyces and pelves or in the anatomical position of the kidneys which identifies the mass as kidney. Bilateral, ectopic, fused pelvic kidneys have been surgically removed as abnormal abdominal masses because of a failure to secure excretory urograms which would have either clearly outlined the congenital anomaly or suggested the need for further investigations by retrograde pyelography. All of you who knew Dr. Alcock* will remember how strongly he emphasized this point, for he had such an experience before the days of excretory urograms.

Dr. MacQueen: Perhaps we can conclude this part of our discussion by saying that there has been no agreement as to the cause of this infant's

* Nathaniel Graham Alcock, M.D. (1881-1953), a member of the faculty in urology at S.U.I. from 1915 until his death, was one of the pioneers in transurethral surgery.

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1. Innerfield, I.: Clinical report cited with permission
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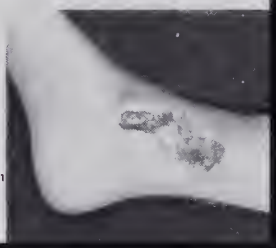
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INFLAMMATORY DERMATOSIS
rapidly spreading rhus dermatitis healed within a week[1]





INFECTED LACERATION
marked reversal in 3 days . . . returned to school . . . closure advanced[1]





THROMBOPHLEBITIS
back on his feet in a week after recurrent episode[1]





REFRACTORY CELLULITIS
normal routine resumed after 4 days of VARIDASE[1]

death. The possibility of an acute renal cortical necrosis has been mentioned, but the factors that caused this necrosis are not exactly known.

Let's pass on, then, to another aspect of the case —the very practical problems present when an infection is recurrent or continuing. How often do you try to isolate the organism? When several organisms are obtained from a culture, what therapy is given?

Dr. Porter, would you discuss these questions from a bacteriologist's point of view?

Dr. J. R. Porter, Bacteriology: This was an example of the cases in which a tremendous amount of bacteriological work is done, and still the bacteriologist renders little help to the clinician. The reason is that we know little about the host factors in infections where even a single organism is involved, and when we come to a situation where three or four organisms are involved, the factors that determine what happens are multiple.

From this patient, we had 25 specimens on 15 different days, and almost every time at least two or three organisms were isolated. The organisms that seemed to persist throughout the illness were Escherichia coli and staphylococci. Proteus vulgaris and Pseudomonas aeruginosa appeared on the last day when a specimen was taken. Pseudomonas aeruginosa produces an extremely toxic substance known as pyocyanin. Whether this had anything to do with the necrosis and the hemorrhage in the intestine and kidney is difficult to say. It is too bad, in such cases, that we don't have more information about the relationship of the parasites to the defense mechanisms of the host. We operate frequently under the fallacious reasoning that if we can isolate the most important organism and treat it with an antibiotic, the infection will be brought immediately under control. Unfortunately, we don't know enough about the mechanisms that are involved, either in the host or in the parasites.

With regard to the generalized Shwartzman reaction that Dr. Layton mentioned, I think there is some evidence that this phenomenon played a role in this particular case, but there is no proof. In a generalized Shwartzman phenomenon, as it is produced experimentally in a rabbit, the sensitizing and inciting agents have to be given intravenously. In the patient under discussion, an analagous situation may have existed. Microbial products may demonstrate a predilection for kidney tissue, causing renal cortical necrosis. Antibiotics may also contribute because of their general toxicity.

Dr. Layton: Do endotoxins from gram-negative organisms have anything in common that might be suspect on a pathogenetic basis?

Dr. Porter: Throughout the enteric group of gram-negative organisms, lipoproteins are present as endotoxins (or as endoantigens), and there are many common relationships. In the generalized Shwartzman phenomenon, it is easiest to incite the reaction with an antigen from a common species. But on the local level, where this phenomenon was originally worked out, the reaction is not restricted experimentally to a single species. We can initiate the phenomenon in the skin, using Escherichia coli or Salmonella typhosa, and incite the reaction eight to 36 hours later with a filtrate from the same species. It is also possible to initiate this phenomenon with the meningococcus (or other organisms) and incite the skin reaction with a different organism. In this example the same antigen may not be involved. As you pointed out, the same species seems to have been involved throughout in this particular patient. Thus, a generalized Shwartzman reaction may have occurred in this patient.

Dr. MacQueen: Dr. Ehrenhaft, an abscess was demonstrated. Why wasn't it drained?

Dr. Johann H. Ehrenhaft, Surgery: There is very little to be added to what has been said already. This infant had infections from the day he was born to the day he died. First, prior to operation, the child developed an aspiration pneumonitis. Then there was a breakdown at the site of the esophageal anastomosis which necessitated drainage on two occasions. Apparently this child did have a septicemia at the time of death which was proved by positive culture of E. coli taken from the spleen at postmortem examination. There is one thing that baffles me in this child's history and hospital course. I have never seen recurrent pyopneumothorax eight weeks after the initial surgery due to a breakdown at the anastomosis site, and I doubt that the empyema which was drained at that time was due to a rebreakdown of the esophageal anastomosis. It is much more likely that this child had a latent empyema which necessitated drainage. Looking at the entire surgical course during this child's life, I don't think that we could have done anything other than to establish drainage whenever it was necessary after the initial breakdown of the esophageal anastomosis.

We have had no children survive with congenital anomalies in association with tracheo-esophageal fistula and esophageal atresia, except for some who had skeletal anomalies. The children with associated congenital heart disease, a multitude of intestinal anomalies, renal malformations and many other congenital lesions have all succumbed, often in spite of adequate repair of the tracheo-esophageal fistula and esophageal atresia.

SUMMARY OF NECROPSY FINDINGS

1. Tracheo-esophageal fistula, post end-to-end anastomosis of esophagus
2. Gastrostomy for feeding
3. Empyema thoracis, chronic, right, with drainage
4. Enteritis, acute, severe

5. Massive renal cortical necrosis, probably due to a generalized Shwartzman reaction, in a solitary left pelvic kidney
6. Congenital absence of right kidney, right ureter, right half of vesical trigone, right renal artery
7. Malrotation of gut
8. Hydrocele of spermatic cord, left.

Coming Meetings

In State

Sept. 14-15	**Recent Clinical Advances in Pediatrics.** S.U.I. College of Medicine, Iowa City
Sept. 15	**Surgical Lectures.** Veterans Administration Hospital, Des Moines
Sept. 16-17	**Internal Medicine Symposium (Iowa-Methodist Hospital Medical Staff).** Des Moines Art Center
Sept. 18-20	**Iowa Chapter, American Academy of General Practice.** Savery Hotel, Des Moines
Sept. 23-24	**Recent Advances in Urology and Meeting of Iowa Urological Society.** S.U.I. College of Medicine, Iowa City
Sept. 23-24	**Arthritis and Related Orthopedic Conditions.** S.U.I. College of Medicine, Iowa City
Oct. 5	**Mercy Hospital Medical Day.** Mercy Hospital, Des Moines
Oct. 8	**Radiology.** S.U.I. College of Medicine, Iowa City
Oct. 20	**Northeast Iowa Clinical Conference.** Masonic Temple, Waterloo

Out of State

Sept. 1-3	**Clinical and Research Advances in Pediatrics.** University of Colorado Medical Center, Denver
Sept. 1-3	**International Congress of Nephrology.** Geneva and Evian, France
Sept. 1-4	**Pacific Dermatologic Association, Inc.** Empress Hotel, Victoria, British Columbia bia
Sept. 1-6	**Pediatrics (University of Colorado Medical Center).** Estes Park, Colorado
Sept. 1-7	**Internal Congress of Nutrition.** Shoreham Hotel, Washington, D. C.
Sept. 3-10	**Inter-American Congress of Radiology.** Sao Paulo, Brazil
Sept. 4-10	**International Society of Hematology.** Tokyo, Japan
Sept. 4-10	**World Congress of Anesthesiologists.** Toronto, Canada
Sept. 5-6	**Child Guidance Problems.** University of Colorado Medical Center, Estes Park
Sept. 5-7	**Conference on Biological Rhythms.** Siena, Italy
Sept. 5-9	**American Association of Blood Banks.** Fairmont Hotel, San Francisco
Sept. 6-9	**Flying Physicians Association, Third Clinical Meeting.** Western Hills Lodge, Wagoner, Oklahoma
Sept. 7-9	**Congress of International Society for Cell Biology.** Paris, France
Sept. 7-9	**International Congress of Criminology.** The Hague, Netherlands
Sept. 7-9	**Oregon State Medical Society Annual Convention.** Portland
Sept. 7-10	**Medical Women's International Association.** Baden-Baden, Germany
Sept. 7-10	**Nevada State Medical Association Annual Meeting.** Stardust Hotel, Las Vegas
Sept. 7-10	**Wyoming State Medical Society.** Jackson Lake Lodge, Moran
Sept. 8-10	**Postgraduate Assembly of St. John's Hospital.** St. John's Hospital, Santa Monica
Sept. 9-10	**Respiratory Allergy.** Cook County Graduate School of Medicine, Chicago
Sept. 10-12	**American Association of Obstetricians and Gynecologists.** The Homestead, Hot Springs, Va.
Sept. 10-12	**American Institute of Hypnosis.** Atlantic City
Sept. 12-13	**International Conference on Trichinellosis, Polish Parasitological Society.** Warsaw, Poland
Sept. 12-14	**A Course in Industrial Medicine.** University of California, San Francisco
Sept. 12-15	**International Society of Blood Transfusion.** Nihon Toshi Center, Hirakawacho, Chiyoda-Ku, Tokyo
Sept. 13-15	**National Cancer Conference (American Cancer Society, Inc., and the National Cancer Institute).** Minneapolis
Sept. 13-15	**New England Tuberculosis Conference.** Plymouth, Massachusetts
Sept. 14-15	**Tri-State Medical Assembly.** Captain Shreve Hotel, Shreveport
Sept. 14-16	**Postgraduate Conference, Retinal Detachment.** Stanford University School of Medicine, San Francisco
Sept. 14-16	**Southern Trudeau Society and Southern Tuberculosis Conference.** Hotel Francis Marion, Charleston
Sept. 14-17	**Colorado State Medical Society.** Stanley Hotel, Estes Park
Sept. 15-17	**Montana Medical Association.** Baxter Hotel, Bozeman
Sept. 15-17	**Obstetrics and Gynecology.** University of California, San Francisco
Sept. 15-22	**General Assembly of the World Medical Association.** Berlin-Hilton Hotel, West Berlin, Germany
Sept. 16	**Medical and Chirurgical Faculty of the State of Maryland, semiannual meeting.** Ocean City
Sept. 16-17	**Twelfth Western Institute on Epilepsy.** University of Kansas Medical Center, Kansas City
Sept. 19-23	**Below-Knee Prosthetics.** University of California at Los Angeles
Sept. 19-24	**The Place of Hematology in Internal Medicine With an Introduction to Radioisotope Technics and Their Application (The Ohio State University College of Medicine).** University Hospital, Ohio State University Health Center, Columbus

Sept. 25-28	**Washington State Medical Association Annual Convention.** Olympic Hotel, Seattle
Sept. 25-29	**National Recreation Congress.** Shoreham Hotel, Washington, D. C.
Sept. 25-Oct. 1	**Michigan State Medical Society.** Detroit
Sept. 26-30	**Surgery of the Hand.** Cook County Graduate School of Medicine, Chicago
Sept. 26-30	**Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago
Sept. 26-Nov. 7	**Surgical Technic.** Cook County Graduate School of Medicine, Chicago
Sept. 27-30	**American Roentgen Ray Society.** Ambassador Hotel, Atlantic City
Sept. 27-Oct. 5	**Pan-Pacific Surgical Association Eighth Intensive Surgical Congress.** Honolulu, Hawaii
Sept. 28-30	**Advanced Electrocardiography.** University of Nebraska College of Medicine, Omaha
Sept. 28-Oct. 1	**International Society of Audiology.** Bonn, Germany
Sept. 28-Oct. 2	**Internal Medicine.** University of California, San Francisco
Oct. 2-4	**Texas Surgical Society.** San Antonio
Oct. 2-5	**Indiana State Medical Association.** Sheraton Hotel, French Lick
Oct. 2-7	**American Society of Anesthesiologists, Inc.** Statler-Hilton Hotel, New York City
Oct. 2-7	**American Society of Plastic and Reconstructive Surgery.** Statler Hotel, Los Angeles
Oct. 2-7	**Pennsylvania Medical Society.** Chalfonte-Haddon Hall, Atlantic City
Oct. 3-4	**San Diego County Heart Association Tenth Annual Symposium on Heart Disease.** El Cortez Hotel, San Diego
Oct. 3-5	**Obstetrics for General Physicians.** Center for Continuation Study, University of Minnesota
Oct. 3-5	**Annual Fall Clinical Conference.** Hotel Muehlebach, Kansas City
Oct. 3-5	**Association of Medical Illustrators.** La Salle Hotel, Chicago
Oct. 3-14	**General Pediatrics.** Cook County Graduate School of Medicine, Chicago
Oct. 3-14	**Obstetrics, General and Surgical, Cook County** Graduate School of Medicine, Chicago
Oct. 3-14	**Electrocardiography and Heart Disease.** Cook County Graduate School of Medicine, Chicago
Oct. 5-6	**Los Angeles County Heart Association 30th Annual Professional Symposium on Cardiovascular Diseases.** Beverly Hilton Hotel, Beverly Hills, Los Angeles
Oct. 5-7	**San Francisco Heart Association 30th Annual Postgraduate Symposium on Heart Disease.** St. Francis Hotel, San Francisco
Oct. 5-7	**American Association for Surgery of Trauma.** Coronado Hotel, San Diego
Oct. 5-8	**American Academy for Cerebral Palsy.** Penn-Sheraton Hotel, Pittsburgh
Oct. 6-8	**American Association of Medical Clinics.** New Orleans
Oct. 6-8	**Central Association of Obstetricians and Gynecologists.** Kansas City, Missouri
Oct. 6-9	**New Hampshire-Vermont State Medical Societies.** Bretton Woods, New Hampshire
Oct. 7-9	**Western Industrial Medical Association Combined Meeting With Fourth Western Industrial Health Conference.** Jack Tar Hotel, San Francisco
Oct. 8	**American Rhinologic Society.** Belmont Hotel, Chicago
Oct. 8	**Metabolic Errors, Genetics and Mental Disease, Second Invitational Conference.** Napa State Hospital, Napa, Calif.
Oct. 8-9	**Surgery (University of California, San Francisco).** Franklin Hospital, San Francisco
Oct. 9	**American Otorhinologic Society for Plastic Surgery, Inc.** Conrad Hilton Hotel, Chicago
Oct. 9	**National Medical Foundation for Eye Care.** Palmer House, Chicago
Oct. 9-12	**Virginia Medical Society.** Cavalier Hotel, Virginia Beach
Oct. 9-14	**American Academy of Ophthalmology and Otolaryngology.** Palmer House, Chicago
Oct. 10-11	**Annual Program Conference of Blue Shield Plans.** Drake Hotel, Chicago
Oct. 10-12	**Congress on Industrial Health (American Medical Association's Council on Occupational Health).** Hotel Charlotte, Charlotte, North Carolina
Oct. 10-13	**American Association of Medical Record Librarians.** Olympia Hotel, Seattle
Oct. 10-13	**Asia-Pacific Academy of Ophthalmology.** Manila, Philippines
Oct. 10-14	**American College of Surgeons Forty-Sixth Annual Clinical Congress.** Civic Auditorium, San Francisco
Oct. 10-14	**Cancer and the Internist (American College of Physicians).** Memorial Center, Sloan-Kettering Institute for Cancer Research, New York City
Oct. 10-14	**Hematology.** Cook County Graduate School of Medicine, Chicago
Oct. 13-15	**Academy of Psychosomatic Medicine.** Benjamin Franklin Hotel, Philadelphia
Oct. 13-15	**American Cancer Society California Division Annual Meeting.** Villa Hotel, San Mateo
Oct. 13-15	**Mississippi Valley Conference on Tuberculosis.** Milwaukee
Oct. 14-15	**Central Neuropsychiatric Association.** French Lick, Indiana
Oct. 14-15	**Dermatology.** University of California, San Francisco
Oct. 14-15	**Fourth Annual Symposium on Human Genetics (Kaiser Foundation Hospitals in Northern California).** Fairmont Hotel, San Francisco
Oct. 16-19	**California Academy of General Practice Twelfth Annual Scientific Assembly.** Masonic Memorial Temple, San Francisco
Oct. 17-19	**Gallbladder Surgery.** Cook County Graduate School of Medicine, Chicago
Oct. 17-20	**American Academy of Pediatrics.** Palmer House, Chicago
Oct. 17-21	**National Safety Congress.** Chicago
Oct. 17-28	**Diagnostic Radiology.** Cook County Graduate School of Medicine, Chicago
Oct. 17-28	**Internal Medicine.** Cook County Graduate School of Medicine, Chicago
Oct. 17-29	**Course in Laryngology and Bronchoesophagology.** University of Illinois College of Medicine, Chicago
Oct. 18	**American Association of Poison Control Centers.** Palmer House, Chicago
Oct. 19-21	**Association of Life Insurance Medical Directors of America.** Statler-Hilton Hotel, New York City
Oct. 20-22	**Dermatology for General Physicians.** Center for Continuation Study, University of Minnesota
Oct. 20-22	**Southwestern Medical Association.** Hilton Hotel, El Paso
Oct. 20-22	**Surgery of Hernia.** Cook County Graduate School of Medicine, Chicago
Oct. 21-22	**Clinical Conference on Cancer of the Female Genital System.** University of Texas M.D. Anderson Hospital and Tumor Institute, Houston
Oct. 21-22	**Symposium on Research Approaches to Psychiatric Problems.** Galesburg State Research Hospital, Galesburg, Illinois
Oct. 21-23	**American Heart Association, Inc.** Kiel Auditorium, St. Louis
Oct. 21-23	**Midwest Forum on Allergy.** Penn-Sheraton Hotel, Pittsburgh
Oct. 22-27	**Western Orthopedic Association.** Hotel Del Coronado, Coronado
Oct. 23	**Stroke and the General Practitioner.** University of Nebraska College of Medicine, Omaha
Oct. 23-26	**American College of Gastroenterology.** Bellevue-Stratford Hotel, Philadelphia
Oct. 24-Nov. 4	**Fractures and Traumatic Surgery.** Cook County Graduate School of Medicine, Chicago
Oct. 26-27	**Industrial Hygiene Foundation of America, Inc.** Mellon Institute, Pittsburgh
Oct. 26-28	**Association of State and Territorial Health Officers.** Jack Tar Hotel, San Francisco
Oct. 26-28	**Conference on Antimicrobial Agency (Society for Industrial Biology).** Washington, D.C.
Oct. 27-29	**Annual Course in Postgraduate Gastroenterology. (The American College of Gastroenterology).** Bellevue-Stratford Hotel, Philadelphia

(Continued on page 586)



AGED PREFER FINANCING THEIR OWN HEALTH CARE

The AMA announced on August 15 that an independent national survey just completed by university sociologists "emphatically proves that the great majority of Americans over 65 are capable of financing their own health care and prefer to do it on their own, without federal government intervention."

Dr. Leonard W. Larson, of Bismarck, president-elect of the AMA, described the study as "uniquely important," and urged Congress to "devote immediate and careful study to the basic facts brought forth in the study" before reaching a final decision on medical-aid legislation for the aged.

"The study disproves some dangerous misconceptions about the aged," Dr. Larson said. "It shows that most of these citizens are in good health, not sick, and are in moderately good financial condition, not hardship cases."

The study was conducted by James W. Wiggins and Helmut Schoeck, director and associate director of the project. Both are members of the faculty in sociology and anthropology at Emory University, in Atlanta. Extended personal interviews were conducted by 100 trained interviewers with 1,500 non-institutionalized persons 65 years of age and over. Supervision of the interviewers was provided by sociologists at more than a dozen well known American universities and colleges. Dr. Wiggins presented the first findings of the study before the Fifth Congress of the International Association of Gerontology, in San Francisco on August 11.

In his statement discussing the results of the study, Dr. Larson emphasized the following facts:

Sixty-one per cent of the people interviewed considered their health was good; 29 per cent thought it was fair; and only 10 per cent thought it was poor.

Ninety per cent could think of no personal medical needs that were not being taken care of. A relatively small percentage of those who said they did have medical needs attributed them to a lack of money for medical care. Often, they said they had decided against treatment on grounds that treatment would not be worth the risk or trouble.

Sixty per cent said that they now are covered by private voluntary health insurance.

Sixty per cent said that if they sold everything they owned and paid all of their outstanding bills, they would have more than $7,500 left in their bank accounts.

Dr. Larson also reported the percentages of the old people who chose each of the several answers to the following question that was asked them by the interviewers: "As you know, some people had not enrolled in a medical insurance plan, such as Blue Cross or Blue Shield, before they became 65 years old. What do you think would help such a person most?"

"Let people over 65 enroll"—26 per cent.

"Establish new private medical insurance plan for people over 65"—16 per cent.

"Federal government to set up medical insurance plan for people over 65 *who want it*"—36 per cent.

"Federal government to set up medical insurance plan which everyone over 65 *must buy*"—10 per cent.

"Don't know"—12 per cent.

Dr. Larson declared that these responses demonstrate that the vast majority of older citizens favor voluntary programs, and that only 10 per cent support compulsory plans.

MEDICAL MUSEUM

The Wisconsin Museum of Medical Progress, designed to carry historic and modern stories of medicine to the public, opens September 1, just across the Mississippi River from Iowa, in Prairie du Chien.

A project of the Charitable, Educational and Scientific Foundation of the State Medical Society of Wisconsin, the Museum is being financed by contributions from physicians and other interested persons. It is housed in the restored military hospital of Old Fort Crawford, which played an important part in the history of the Midwest.

Some of its 34 displays and exhibits will trace medicine from the days of Indian cures to the "horse and buggy" doctor of the early twentieth century. Included in the series will be such topics as medicine in the early fort system of the Northwest Territory, prevalent diseases of the frontier, Civil War medicine, and a variety of materials illustrating the lives of the early physicians of the area.

It was at Old Fort Crawford that Dr. William Beaumont made a highly significant contribution to medicine. In treating an Indian guide with a gunshot wound in his stomach, while stationed on an island in Lake Huron, Dr. Beaumont began availing himself of his opportunity to study the human digestive processes, and when he was transferred to Prairie du Chien he persuaded the man to accompany him and submit to further experiments. A series of displays will tell the story of Dr. Beaumont and the guide, Alexis St. Martin.

A third major theme will be the tracing of the development of medicine from the early days of

quackery and diploma mills to the establishment of organized medicine and the perfecting of medical education. Yet, a display of modern quackery will serve as a reminder that activities in this field are not just history but are a present-day problem.

The opening of the Museum on September 1 climaxes three decades of preparation and planning. In 1931, the Wisconsin State Medical Society established a Section on Medical History to begin collecting materials for display, and a permanent Committee on Medical History, of the Foundation, subsequently acquired the property and supervised the construction of the physical facilities. However, the opening of the Museum will not end the activities of these groups. A final display at the Museum will show the proposed expansion plans. An administration building is already under construction, and a model of the site will also show a planned "new museum" and a pavilion which will serve as an annex and picnic area.

Doctors throughout Iowa can do themselves and organized medicine a favor by mentioning to their friends and acquaintances that the Wisconsin Museum of Medical Progress deserves a half-day of their time when they go to enjoy the spectacular autumn landscape and foliage of northeast Iowa.

VARIED RATES OF ARTERY HARDENING

A slightly faster than average rate of hardening of the aorta is associated with a striking increase in the incidence of heart attacks, according to Drs. Sigmund L. Wilens and Cassius M. Plair, of the New York City VA Hospital. In a report published in the August issue of AMA ARCHIVES OF PATHOLOGY, they summarized findings at 285 autopsies of men who had died of aortic sclerosis.

The study showed that the incidence of myocardial infarction was five and one-half times as great in men with aortic sclerosis that had advanced 15 or more years beyond the average, as compared with men in whom the development of the disease was 15 or more years behind the average. "Even a slight increase above average in the rate of development of arteriosclerosis," they said, "causes a marked increase in the incidence of myocardial infarction."

They drew these further conclusions: (1) In the average man (about one out of two) arteriosclerosis progresses to about the same extent throughout life. (2) In exceptional persons (about one in eight) the process is significantly retarded. (3) In about the same proportion, it is accelerated. (4) The gradual enlargement of the arteries with age is sufficient in the average person to maintain an adequate blood flow despite the thickening of the lining of the arteries. (5) Arterial blood flow is impaired when the thickening process precedes enlargement of the arteries in the young man, or progresses at a more rapid than average rate in the middle-aged. A young man with a greater than average degree of hardening of the arteries may be more vulnerable to a heart attack than is an older man with enlarged arteries that can accommodate a much more severe case of arteriosclerosis.

TUBERCULOSIS STUDY COMMITTEE

A Tuberculosis Study Committee has been named by Dr. Edmund Zimmerer, the state commissioner of health, to work with him in devising and instituting a statewide TB registry and perpetual follow-up program. The personnel is as follows: Mr. Norris F. (Bing) Crosby, West Des Moines, chairman; Dr. Ralph H. Heeren, Des Moines; Dr. Franklin H. Top, Iowa City; Dr. Elmer A. Larsen, Centerville; Dr. Daniel F. Crowley, Des Moines; and Mr. Paul C. Williamson, Des Moines.

At present, the group is awaiting a response from the Executive Council of the State of Iowa to its request for an $80,000 appropriation to finance the prerequisite statewide survey. As of now, Dr. Zimmerer says, there are no records of the status of patients who have been treated and dismissed or otherwise lost sight of. They may have moved from the state, may have suffered relapses, may have died or may have regained and kept good health. No one knows. Furthermore, the finding, treatment and follow-up of new TB cases should be better organized than at present. In too many instances, Dr. Zimmerer believes, case-finding has stopped short of making sure that the new patients get adequate treatment.

Letters to the Editor

Sirs:

While we natives of Iowa claim Iowa the best state of them all, and while we doctors take credit for lengthening the span of life of our citizens, we seldom if ever come up with any proof.

Yesterday I visited with Rev. Hugh S. Jackson of this city. He and his wife just returned from a class reunion of their graduating class at Simpson —the group's 60th anniversary.

Now this is the story: There were 14 in this class, and this week all six living members were in attendance, and their ages were 87, 85, 83, 82 and 80 years. The Rev. Mr. Jackson is 84.

And remember that back in those days they had no federal aid to health, education and welfare. A second interesting thing, medically, is that these six were all traveling under their own power, and all were mentally alert and normal, and enjoying really good health.

All this adds up to the old Chinese proverb "There is no fool like an old fool, and if you don't believe that, ask a young fool."

RALPH LOVELADY, M.D.

Sidney, Iowa
June 27, 1960

RECENT CLINICAL ADVANCES IN PEDIATRICS

A postgraduate course entitled "Recent Clinical Advances in Pediatrics" will be presented at the S.U.I. College of Medicine, in Iowa City on September 14 and 15, under the joint sponsorship of the Iowa Pediatric Society, the Division of Maternal and Child Health of the State Department of Health, and the S.U.I. Department of Pediatrics. The Iowa Chapter of the American Academy of General Practice will allow 9½ hrs. of Category I credit to those of its members who attend the entire program.

The registration fee will be $10 for members of the Iowa Pediatric Society, and $20 for non-members. Physicians who plan to attend are urged to register in advance by sending their checks to Dr. John A. Gius, the director of postgraduate medical studies at S.U.I., requesting parking permits and indicating, if they wish, the housing they wish reserved for them either at the Iowa Center for Continuation Study or at an off-campus hotel or motel.

Wednesday, September 14

8:45 a.m. REGISTRATION

9:20 "Disseminated Lupus Erythematosis in the Pediatric Age Group"—Robert D. Gauchat, M.D.

10:15 "Chromosomal Abnormalities and Pediatric Disease"—Arthur Robinson, M.D., assistant professor of pediatrics at the University of Colorado

11:00 CLINICAL CASE PRESENTATIONS AND DISCUSSION OF PATIENTS WITH ABNORMAL CHROMOSOMAL ANALYSIS—Dr. Robinson and Hans Zellweger, M.D.

12:15 p.m. LUNCHEON MEETING OF THE ACADEMY OF PEDIATRICS

2:00 "The Action of Growth Hormone in Man"—Maurice Raben, M.D., associate professor of medicine at the Tufts University Medical School

2:30 CASE PRESENTATIONS AND DISCUSSION OF PATIENTS WITH GROWTH ABNORMALITIES—Dr. Raben and Charles Read, M.D.

3:15 "New Concepts in Child Health Supervision"—Barbara Korsch, M.D., professor of pediatrics at the Cornell University Medical School

3:55 "Report on the 1960 White House Conference on Child Welfare"—Robert Kugel, M.D.

4:25 "Trends in Anticonvulsant Therapy in Children"—John MacQueen, M.D.

6:30 SOCIAL HOUR AND DINNER—University Athletic Club

Thursday, September 15

9:00 a.m. "The Diagnosis and Management of Bleeding in the First Week of Life"—William Connor, M.D., and Robert Carter, M.D.

9:40 "The Management of Feeding Problems in Children"—Dr. Korsch and Dr. Kugel

10:35 "The Early Diagnosis of Cerebral Palsy"—Raymond Rembolt, M.D.

11:15 "The Therapy of Asthma in Children"—William Anderson, M.D.

SOCIETY'S LIFE INSURANCE PLAN PAYS BENEFICIARIES $85,000

Six death claims totaling $85,000 have been paid since the Life Insurance Plan of the Iowa State Medical Society went into effect in June, 1959.

The first claim was paid within one month after the initial policies were issued. It was a $20,000 accidental death payment.

Of the six death benefits paid under the plan, three were by accidental means, and beneficiaries received double the face amount of the policy.

Double Indemnity for accidental death was one of the important features the Committee on Group Insurance recommended when considering the Society's Life Insurance Plan. The value of this feature is graphically pointed up by the fact that three of the first six claims were for accidental deaths.

All active members who have not enrolled under the Society's Life Insurance Plan are still eligible for consideration by the Insurance Company. For more information about your Society's low-cost Life Plan, contact the Administrators—Holmes, Prouty, Murphy & May, 1022 High Street, Des Moines, Iowa.

LECTURES AT THE DES MOINES VETERANS HOSPITAL

The Surgical Service meeting at the Des Moines VA Hospital that was postponed from June has been rescheduled for September 15, 1960.

The guest lecturer will be Dr. Lester R. Dragstedt, professor of surgery at the University of Florida Medical School, Gainesville. At 8:00 a.m., he will speak on "Pathogenesis of Duodenal Ulcer," and at 3:00 p.m. on "Pathogenesis of Gastric Ulcer."

All members of the Iowa State Medical Society, and other physicians, are cordially invited to attend.

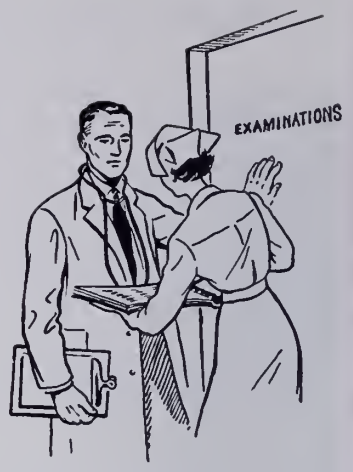
A HAZARD OF AIR CONDITIONING

Patients who complain of burning, itching skin should be urged to check their window air conditioners. It can be that those devices are introducing mites along with cool air.

According to an article in the August issue of GP, published by the American Academy of General Practice, the window ledge just beneath a window air conditioner is a perfect nesting place for birds, the carriers of common mites. To prevent a mite invasion, homeowners can screen both the air intakes on their air conditioners, and the warm, dry ledges below the units so as to stop birds from nesting there. Further, window ledges should be painted with commercial preparations designed to discourage avian mite homesteaders.

The author, Dr. A. S. Genest, of Atlanta, points out that immediate showering will relieve the itching to some extent, but a fine, generalized rash may develop. The rash disappears, however, if the mites are removed from the surface of the skin. Because of their size—one fiftieth of an inch long—avian mites are difficult to see.

THE DOCTOR'S BUSINESS



Liquidity in Your Estate

HOWARD D. BAKER

WATERLOO

Every business and professional person knows the meaning and importance of liquid assets—that is, assets that can easily and quickly be converted into cash. Similarly, liquidity is just as important in the expedient settlement of an estate as in the operation of a business.

If an estate does not have the cash or liquid assets that are needed, substantial losses may result, and in many cases the entire estate plan will be placed in jeopardy. Because of the importance of this subject to all persons in the systematic planning of their estates, the following is a discussion of some of the pertinent problems of liquidity.

ESTIMATING THE NEED FOR CASH

The average person is seldom cognizant of the amount of cash that will be required to settle his estate. Burial, medical and other last expenses, current unpaid bills, mortgages and notes will all have to be settled. Income tax will probably be due on the final tax returns of the decedent, court costs and administrative costs, and finally federal estate tax and state inheritance tax will fall due within a period of 15 to 18 months after death. It is obvious that in the case of a relatively large estate, the amount of cash necessary can amount to thousands of dollars. If sufficient liquid cash is not available, unnecessary and substantial losses may result. Valuable property may have to be forfeited in an unfavorable market, or a controlling business interest may have to be sacrificed. An estate of cash needs is of prime importance in planning for adequate liquidity. Such an estimate should be based on the preceding factors and should be as precise as possible.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

TYPE AND AVAILABILITY OF LIQUID ASSETS

As a general rule, cash for the settlement of an estate should come from the following sources: cash; savings and checking accounts; corporate, municipal and United States government bonds; and marketable securities. At the time your estate plan is initiated, you should consult with your attorney, life insurance agent, business consultant and broker before designating assets to be used for cash needs.

In many estates, there are sufficient liquid assets, but they may not be available. For example, bank accounts and bonds are often held in joint tenancy with the right of survivorship. In such cases, although these assets were intended to provide liquidity for the estate, they may instead pass directly to another person by operation of law.

A BUSINESS INTEREST

If a business is to be liquidated, the administrator or executor should have the right to operate it for a reasonable period of time in order to liquidate it under the most favorable circumstances. This will be possible only if the necessary funds are available to the administrator or executor. Liquidity will also be a controlling influence over the terms of a sale of the business, and will govern whether or not a contract or mortgage sale can be made.

If the business is to be continued, obviously sufficient ready cash must be provided to insure against hampering the efficient operation without forced sale of some other assets to provide working cash.

The problem of liquidity in the settlement of an estate is a very real and important one, and one that is subject to constant change. Therefore, it should be reviewed and revised periodically by the property owner under the supervision of an experienced attorney or financial counselor. By following this policy, you will assure realization of your estate plan and maximum protection for your loved ones.

In the Public Interest



The Iowa Chiropractic Laws Must Not Be Changed

The provisions of the Code of Iowa that set limits upon the scope of practice of chiropractors are based upon what the Palmers originally envisioned and what their school at Davenport still maintains is the proper role of its graduates. Those provisions should not be changed, for chiropractic schools are not providing and cannot provide the quality of instruction and the types of laboratory and hospital practice that are essential in training men and women for the diagnosis and treatment of all human ailments.

The Iowa Code (151.1) defines chiropractors as "persons who treat human ailments by the adjustment by hand of the articulations of the spine or by other incidental adjustments," and (151.5) says they may neither use "operative surgery [or] osteopathy, nor administer or prescribe any drug or medicine included in materia medica."

The Iowa Supreme Court enforced that law in *State of Iowa vs. Charles J. Boston,* 226 Iowa 429 (1939) when it enjoined the defendant chiropractor from "the use of physiotherapy, electrotherapy, colonic irrigation, colon hygiene, ultraviolet rays, infrared rays, radionics machines, traction tables, white lights, cold quartz ultraviolet light, neuroelectric vitalizer, electric vibrator, galvanic current and sinusoidal current for the purpose of treatment of the sick or for any other purpose in connection with his practice of chiropractic, and from the use of medicine and surgery and from . . . the prescribing for or the advising of his patients with respect to diet."

From the preceding passages it should be apparent that there are two types of chiropractors—(1) those who confine themselves to manual adjustments of the spine and other incidental adjustments (the "straights"), and whose methods are authorized by Iowa law; and (2) those who employ light, heat and colonic irrigation, prescribe diets, and on occasion may even undertake medication and surgical procedures (the "mixers"), whose methods lack legal authorization in Iowa, and were specifically forbidden by the Iowa Supreme Court in the decision that has been cited.

It would be unrealistic to conclude that "mixer" chiropractors stay out of Iowa or forego the use of non-manipulative technics because of the restrictive terms of the Iowa practice act and because of the Supreme Court decision in the Boston case. As a matter of fact, the "mixers" have their national headquarters in Webster City, and their state group, the Iowa Chiropractors Association was reported to have 200 members in 1955.

They would like to have legal sanction, though there is evidence that they already are exceeding the strict limitations set by the Iowa law. Convictions on charges of exceeding the authorized scope of practice or of practicing medicine without a license are notoriously hard to get, both because pseudo-medical treatments are not customarily given before witnesses and because, like the victims of confidence men, individuals who have been mistreated or have paid a great deal for nothing at all usually are unwilling publicly to acknowledge their foolishness in having sought help from such people.

AUTHORIZING "MIXER" PRACTICE WOULD FURTHER MISLEAD THE PUBLIC

As a matter of fact, the "mixers" want the Iowa statutes liberalized because of the implied endorsement that such a change would entail. And such an endorsement would be *all* that the liberalization would accomplish. It is contended that by taking such action the state would put itself in position to require an upgrading of chiropractic education and to control the practitioners efficiently. But real improvements don't necessarily result from the passage of laws or the adoption of supervisory regulations. The chiropractic schools are staffed by chiropractors, rather than by science graduates of accredited universities and colleges, and though the courses taught at those institutions already bear names and take up lengths of time comparable with those offered at medical schools, the physical facilities and the syllabi are inferior. The graduates of such places, then, should

not be enabled to tell people that the State of Iowa has given them its blessing.

HERE ARE SOME RECENT AND AUTHORITATIVE FACTS AND FIGURES

Chiropractors are more numerous in California than in any other state, and thus although up-to-date national findings would no doubt be preferable, it is fortunate that the results of an impartial and thorough study of chiropractic there have just been published.* The Stanford Research Institute, at the behest of and with funds provided by the John Randolph Haynes and Dora Haynes Foundation, gathered the data that will be presented here.

—Of approximately 25,000 chiropractors in the United States, 4,444 were practicing in California in 1957. Seventy-five per cent of the latter number were of the "mixer" persuasion.

—Of all conditions attended by chiropractors, osteopaths and medical doctors (excluding those of hospital inpatients, to whom chiropractors would have had no access), the chiropractors attended only 3.6 per cent during a survey period, despite the fact that chiropractors comprised 16 per cent of the total number of practitioners of the three healing systems sanctioned in California. Osteopaths (9 per cent of all the practitioners there) saw 9.3 per cent of all conditions, and M.D.'s (75 per cent of the total practitioners) saw 87 per cent of all conditions.

—Forty-seven per cent of all conditions seen by chiropractors were directly related to the bones, joints (including the spine) or muscles. However, they had undertaken to diagnose and treat 18 per cent of the reported hemorrhoid cases and nearly 9 per cent of the cases of varicose veins. It appears, the report says, that about one-third of chiropractic patients are elderly people with sore backs or joints, but that over one-half are working adults —mostly laborers or their dependents—with a variety of complaints, generally of a chronic nature.

—The California investigators found that 57 different types of diagnostic apparatus were in use by chiropractors, but that only a very low percentage of them employed any particular one of them. About 23 per cent possessed x-ray equipment. Twelve per cent used the neurocalometer, a device capable of measuring differences in temperature on either side of the spine. The rest weren't in sufficiently general use to be thought worthy of individual mention.

In addition, there were various allegedly therapeutic machines in the chiropractors' offices. Eight per cent of them used inhalation devices of one sort or another, but most commonly a machine that generates ozone while alternating tubes glow red and blue "much in the manner of a neon sign." In about four per cent of the offices surveyed, there was a so-called "radionic machine" that was found to be incapable of detecting or measuring any form of radiation. "The only output was variation of the position and color of its many lights. These effects could be controlled by the operator through manipulating the numerous switches on the machine."

—Thirty-nine chiropractic schools have functioned in California at one time or another, but only three of them remain open, and between 1950 and 1958 chiropractic school enrollment dropped 22 per cent, about equal to the drop in the numbers of chiropractors per 100,000 population in the state.

—Among chiropractic students, as well as among the practitioners surveyed, about one-half had entered training without the benefit of a college education of any kind or duration. Almost but not quite all of them had graduated from high school.

—Of the teachers in the chiropractic schools, only 38 per cent said that they had had some college training, and the investigators were able to verify that two out of three of those who claimed to possess college degrees actually had earned them. Lecture room space was adequate at all three institutions, but library and laboratory facilities were no more than rudimentary and gave the appearance of being little used. "These conditions," the investigators concluded, "suggest that libraries and laboratories do not play an important part in the education of a chiropractor."

CHIROPRACTORS MUST BE KEPT OUT OF MEDICINE'S BASEMENT

It thus is evident that the "mixer" faction of chiropractors are ambitious to enter the practice of medicine by way of the basement, and that they have scored some successes in other states, chiefly through wheedling left-handed endorsements from their governments.

Curiously enough, many of these people—perhaps the majority of them—manifest complete confidence in the efficacy of their methods, but their good will should not be thought to justify permitting them to treat human patients, since none of their technics has been proved efficacious and—even more importantly—since anyone who is permitted to treat any but relatively minor and highly localized human ailments should be prepared to treat the whole person.

True physicians are the products of long years of study under competent teachers, and of at least one further year of laboratory and clinical practice in well-equipped hospitals. The Stanford Report shows that chiropractic offers nothing even remotely comparable with that type of education.

One cannot create physicians merely by passing a law!

* CHIROPRACTIC IN CALIFORNIA: A REPORT BY THE STANFORD RESEARCH INSTITUTE, SOUTHERN CALIFORNIA LABORATORIES, SOUTH PASADENA, CALIFORNIA. Los Angeles, The Haynes Foundation, 1960, 240pp., $5.

SOCIAL SECURITY

Congressman JOHN W. BYRNES, *Wisconsin*

There is a relatively small but very vocal group of people who style themselves the "friends of Social Security." All of us have a great responsibility to try and save Social Security from its so-called "friends." Social Security is not a one-way street—we must always give equal recognition to the burden of taxes for any benefit that it is proposed Congress adopt.

I do not like to cast doubts upon the future of Social Security. But when I see hundreds of bills introduced in every Congress—when I note that some of the proposals presented to expand this program—go so far that even the authors of the bills admit an unconscionable tax would be required, I am worried. I get concerned about the direction in which we would move if we threw discretion to the wind. I think we are in real danger when we see the rush to liberalize this program without proper recognition of the burdens that would be imposed.

There are a few things that should be kept clearly in mind when new benefits are considered. Just because the imposition of the full tax required to pay present benefits has been postponed—just because the increased taxes to pay for increases or additions to present benefits are postponed—does not mean that the day of reckoning can continually be postponed.

A great danger to the system and the millions who look to it for a base of retirement and survivor income is the threat posed by the possibility of future Congressional action radically enlarging tax costs. Because we have put off into the future the real burden of taxes to support the program, modern demagogues have had a field day with Social Security.

In recognition of the vote-getting ability of Social Security, each year sees the introduction of hundreds of bills in Congress liberalizing the program. *Liberalize* in this context has only one meaning—bigger and better benefits. Rarely, if ever, do the authors of these bills discuss the increased costs and increased taxes their bills would require. The emphasis is all upon the additional dollars the present beneficiaries would receive. This is the approach which apparently wins votes. It has been a singularly successful one. Under the pressure for increased benefits, Congress in every election year, beginning in 1950, has passed amendments to the basic law increasing costs and the ultimate burden upon the worker.

This could be done without political fear because the real impact of Social Security taxes can be and always is postponed. What politician can lose votes under a system which permits more benefits to be doled out to living voters now—and be paid for later—by some other generation?

The great peril will come from the attempt to enact various increases and new benefits piecemeal. The pressure over the years will be to approve one provision here, another there, emphasizing always the greater need for the new benefit and minimizing or ignoring the cost, winding up with an inflated program requiring tax burdens which endanger the future of the whole system.

A recognition of the burden that we are placing on future workers is long overdue and it is time that we considered this burden when we think in terms of adding new benefits with additions to that burden.

Few people realize how many times we have revised the tax schedule during the brief period this program has been in existence.

The maximum tax on a worker was originally scheduled to be $90 a year. Today the tax is $144 and is scheduled to rise to $216 a year.

By 1969, the Social Security tax rate under the present law will rise to 4½ per cent on an employee. For a man making $4,800, with a wife and three children, his Social Security tax at 4½ per cent will mean about as many tax dollars for Social Security as he will have to pay in federal income taxes at 20 per cent. Remember, the Social Security tax is a gross tax. There are no personal exemptions and deductions.

Quite frankly, the willingness of workers to support the present schedule of benefits has not been tested. It hasn't been tested because up to now those paying the tax are paying only a small fraction of the true cost of the benefits. For example, a worker who has been covered by the system from the beginning at the maximum rate and retiring today has paid in only about 4 per cent of the true cost of the benefits he will receive. The average person receiving the minimum benefit today, together with his employer, has paid in only about 1 per cent of the value of the benefit. For them, I suppose you can call the system a "good deal." But would it be considered a "good deal" if he had been required to pay 100 per cent of the cost of the benefit as workers and employers some day will be required to do?

We just don't know and will not know for years to come because the full tax rate to pay current benefits (the level premium cost) will not go into effect for 10 years, and even then it will only be the persons entering the working group at that time who will pay full cost. And, between now and 1969, I'm afraid, some further changes in this tax burden are going to be made. I'm not talking about reductions.

The income a worker can currently devote to future contingencies is limited by his ability to meet the immediate needs of his family. When the cost of Social Security begins to cut too deeply into daily living requirements, people will begin to make unfavorable comparisons between distant benefits and immediate costs. When the time comes that current workers protest the cost of providing benefits for current retirees under the system—look out! And those who should look out the most

are those who will at that date be the beneficiaries, the retirees, the survivors, the dependents.

The Social Security system cannot survive without the willing support of workers and employers whose tax money provides the means to pay the benefits.

Every American must recognize that Social Security is designed to provide a minimum basic protection—not total security—against the hazards it covers. Social Security is not a complete substitute for other common sense precautions, including individual foresight and responsibility. It can never be a substitute—except at prohibitive costs through exorbitant and self-destroying tax burdens.

POSTGRADUATE CONFERENCES AT S.U.I.

Following is a complete list of the medical postgraduate conferences that are scheduled to be held at the S.U.I. College of Medicine during the 1960-1961 academic year.

September 14-15	Pediatrics
September 23-24	Recent Advances in Urology
September 23-24	Arthritis and Allied Disorders
October 8	Radiology
December 6-7	Surgery
January 11	Obstetrics and Gynecology
February 21-24	Refresher Course for General Practitioners
March 17-18	Anesthesiology
April 4-5	Neurology, Neurosurgery and Orthopedics
June 19-23	Current Aspects of Internal Medicine

The complete program for the pediatrics conference appears on page 577. Two meetings are to be held on September 23-24, immediately preceding the Iowa-Oregon State football game in Iowa City.

Recent Advances in Urology

Registration free to members of the Iowa Urological Society; for other physicians, $20. Approved for 9 hrs. Category I AAGP credit.

Friday, September 23

8:30 a.m. REGISTRATION

9:00 URO-SURGICAL DEMONSTRATIONS—R. H. Flocks, M.D., R. G. Bunge, M.D., D. A. Culp, M.D., B. J. Begley, M.D., and J. S. Greenleaf, M.D.

1:30 p.m. "Carcinoma of the Prostate"—Herbert Brendler, M.D., associate professor of urology, New York University

2:30 "Peritoneal Dialysis for Renal Insufficiency" —Dr. Culp

3:30 "Testicular Findings in the Adrenogenital Syndrome"—Dr. Bunge

4:15 "The Medical Management of Wilms Tumor" —Robert E. Carter, M.D.

4:45 "Bladder Neck Obstruction in Children"—Dr. Begley

5:15 BUSINESS MEETING: Iowa Urological Society

7:00 DINNER: Iowa Urological Society—University Athletic Club

Saturday, September 24

9:00 a.m. PYELOGRAM CLINIC AND CASE PRESENTATIONS

Arthritis and Related Orthopedic Conditions

Registration is $10 for Iowa Orthopedic Society members; $20 for non-member physicians. Approved for 9 hrs. Category I AAGP credit.

Friday, September 23

8:30 a.m. REGISTRATION

9:15 "Biopsy as a Diagnostic Procedure in Rheumatic Diseases"—J. M. Layton, M.D.

9:45 "Long-Term Management of Juvenile Arthritis"—R. E. Hodges, M.D.

10:30 "Skeletal Deformities Caused by Epiphyseal Plate Disorders"—I. V. Ponseti, M.D.

11:10 "Facts and Fallacies in the Dietary Management of Rheumatoid Arthritis"—R. E. Hodges, M.D.

11:45 CASE PRESENTATIONS

1:30 p.m. "Pigmented Villo-Nodular Synovitis"—M. Bonfiglio, M.D.

2:00 "The Surgical Rehabilitation of the Rheumatoid Hand"—A. E. Flatt, M.D.

2:30 "Hypercortisonism in Rheumatoid Arthritis" —W. D. Paul, M.D.

3:00 CASE PRESENTATIONS

6:30 DINNER—Curt Yocom's Restaurant
Speaker: Mr. Forest Evashevski

Saturday, September 24

9:00 a.m. "Treatment of Post-Irradiation Fractures of the Neck of the Femur"—J. Leabhart, M.D.

9:40 "The End Results of the Treatment of Syndactyly"—D. Kettlekamp, M.D.

10:40 "The End Results of the Treatment of Club Foot"—Dr. Ponseti

11:20 CASE PRESENTATIONS

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 23-26, 1961

Veterans Memorial Auditorium

Des Moines



MEDICAL HISTORY

120 Years of the Medical Profession In Cedar County, Iowa

H. E. O'NEAL, M.D., AND MRS. VADA YULE KLITH

TIPTON

There have been about 266 physicians in Cedar County, Iowa, at various times during the period extending from 1838 to the end of 1959, and this account, which will at least name all of them, will be quite lengthy. At the outset, we want to assure our readers that although the maintenance of chronological order may give our record the appearance of a biographical catalog, they will find spicy elements as well as a description of the serious and sober side of medical procedures and practice throughout the past 120 years.

Years ago, many of the individuals who called themselves doctors were charlatans, and some of the others had little formal training but still did a great deal of good for the early settlers. Regarding all of those people, our sources of information have sometimes been peculiarly biased. Political lines, in particular, were very sharply drawn, and the Republican newspaper, which provides the only complete file of news for the county, was hypersensitive about political affiliations and undoubtedly gave the short end of the stick to the Democrats among the local practitioners. Further, the news columns contained an amount of editorializing and "slanting" that is not to be found in newspapers today. But suffice it to say that we have done our best to report the truth. We haven't completed the job to our entire satisfaction, and we know that there are gaps in the story. Any additional information will be most appreciated.

THE EARLIEST YEARS

In December, 1837, when Cedar County was created by an act of the Territorial Legislature of Wisconsin, there were not more than 150 persons in the County. Everything in the area was in almost chaotic confusion. There were no civil officers, no townships and no villages except in name. The people had no representatives in either branch of the Legislature, and the legislators had but little, if any, definite knowledge of the Territory. It is improbable that any of the legislators had been in any part of the region west of the Mississippi.

The county commissioners of Cedar County met for the first time on April 2, 1838. On July 3 of that year the law creating the Territory of Iowa became operative, and the county commissioners met on the next day, July 4, to transact business for the first time under the territorial laws of Iowa.

Many of the medical men who came to Cedar County in the early days were adventurers as well as medical men. Not all were medical school graduates, for many of them had obtained their training by "reading" under and assisting older physicians for a few months. Some engaged in diverse pursuits to augment their incomes. Several operated drug stores in conjunction with their medical practices; others engaged in real estate ventures; many were active in territorial and, later, in state politics. Still others helped to lay the foundations of our county and state as educators or as school officials. All in all, they were a colorful group.

Harvey G. Whitlock, a renegade Mormon and a self-constituted physician, settled at Antwerp in the summer of 1839, and thus was the first resident physician in the County. He was a frontier product whose name figured in court records to an alarming extent. In one episode, he had threatened to whip Judge Grant, who had done him some fancied injustice in a trial, but when Grant, a smaller man, "laid aside the judge" for a few moments and went for his opponent, Whitlock evidently decided that discretion is the better part of valor and fled the battlefield.

Perhaps Whitlock wasn't entirely a scoundrel, for he had some loyal friends. His name was presented by the Tipton delegation, headed by Judge Bissell, as a candidate for the Democratic nomination to the House of Representatives, and when, on June 17, 1841, he had been defeated on the first ballot at the District Convention, the delegation walked out of the meeting in indignation.

In the census of Tipton taken in March, 1842, there were 30 voters among a total of 94 souls, of whom nine were Harvey G. Whitlock, his wife and their seven children. He built a house on

Cedar Street, between Sixth and Seventh Streets, but afterward moved to California.

S. B. Grubbs also settled in Cedar County in 1839, and was the first resident physician in the town of Rochester. He remained in the County for many years as a farmer in Sugar Creek Township.

Elisha Henry, a pretender to the science of medicine, also settled in Rochester in 1839, but was a better carpenter than physician. He moved to Pedee in 1840, and when a post office was established there, near the timber, he was appointed postmaster. He had charge of the ferry in 1844, and eventually he moved to California, where he died.

Noble Barren settled in the County in 1840. He was a pretended physician, and as such dealt out to the sick freely during the day, but followed his legitimate trade, shoemaking, at night.

After these men came a real physician, *Dr. Swan,* about whom little is recorded other than that he lived in Tipton in a frame house with a large green lawn.

Dr. Richard Hall located in Tipton in 1844, opened a drug store in 1847, and continued there until he contracted "California fever." While he was out west with the other "Forty-niners," the first newspaper to be published in Cedar County, THE TIPTON TIMES AND CEDAR COUNTY CONSERVATIVE, was established. A monthly paper favoring the Whig Party, it carried Dr. Hall's name as editor, although he knew nothing whatever of the publication for some time. The publisher sought thus to shift the burden of personal accountability that was peculiar to pioneer journalism.

Dr. Hall returned to Tipton in 1853, and remained in the drug business until 1872. He had a large apple orchard, sold sewing machines for a while, and raised a few cattle. He once sold a calf, six months old, weighing 660 lbs. which the community was told "shows what good care and proper attention will do." Though his health was exceedingly feeble during the last 10 years of his life, he had attained 82 years of age when he died, December 9, 1891.

On November 16, 1844, *Dr. Meredith* and *Dr. Rickey* were resident physicians at Rochester. Dr. Rickey later lived in Keokuk, and Dr. Meredith died at Cedar Falls, where he had been one of the publishers of the BANNER.

The first physician at Cedar Bluffs was a *Dr. Davis,* who came there in about 1846.

Dr. Isaac S. Titus, who had been a popular young doctor in Tipton, joined the gold rush to California in 1849. He settled in Placerville after pursuing the elusive "veins," was active in the organization of the El Dorado Medical Society there, was its secretary and the chairman of several of its important committees, and was also secretary of a large indignation meeting which met to condemn the outrages committed upon the ballot boxes of California by a set of political gamblers. On March 29, 1857, in San Francisco, he was married to Miss Seba Spicer, a former assistant editor of the CEDAR COUNTY ADVERTISER.

Dr. Mustoe Chambers departed this life in his seventy-sixth year, on September 28, 1865, after having been a resident of Tipton for 15 years. He had been born at Staunton, Virginia, August 10, 1790, had served as adjutant in the War of 1812, and afterward had studied medicine and graduated from Pennsylvania University in Philadelphia. He had practiced for 20 years in his native Pennsylvania before going to Ohio. There, he was a very successful physician, and for nine years his income was $5,000. Seven of his children survived him, one of them being Dr. Charles Chambers, of Tipton. The two doctors, father and son, were interested in the Lyons Iowa Central Railroad Company, and with Dr. Richard Hall and others, they solicited subscriptions for the capital shares.

Dr. Charles L. Chambers had been born in Rockingham County, Virginia, May 18, 1818, and with his parents had moved to Dayton, Ohio, when he was 12 years of age. He had received his education there, and had studied medicine with his father, Dr. Mustoe Chambers. He came to Muscatine in 1847, and to Tipton, along with his family and his father, on June 6, 1850. During the Civil War, he was a surgeon of the 35th Regiment, I.V.I. He had married Miss Anna E. Hudson on November 11, 1847, a daughter of Rev. John Hudson, formerly of Lexington, Kentucky, but at the time of Anna's marriage a Presbyterian minister at Muscatine and the eldest minister in the presbytery. Dr. and Mrs. Chambers had eight children: Mrs. Bessie Kirk, Mary, Willie, George, Louis, John, Mustoe and Charles L.

Dr. Chambers carried saddle bags and rode Old Fox, a "loping horse." He was a swift rider, and although he was sometime difficult to awaken, when once aroused he put on so much speed that the messenger had hard work keeping up, such was the gait of the "loping horse."

With his father, he operated a drug store successfully until they disposed of the building and the whole concern in 1857. He formed partnerships with Drs. Turner, Kennedy, Shoemaker and Safely at different times during his career. In 1881, Dr. Chambers located in Muscatine, seeking a practice more exclusively in town, but he soon returned to Tipton. Sometime later, he moved to Cedar Rapids. Dr. Chambers was among those who signed the Fee Bill passed by the Iowa and Illinois Medical Association in 1869.

Dr. H. C. Gill, a physician and surgeon, was born in Chester County, Pennsylvania, in 1821, came to Iowa in 1850, and located in Springdale and engaged in the practice of medicine. In 1843 he had married Anna Essig, who had been born in Chester, Pennsylvania. They had four children:

Davis, Mrs. Maggie Bowersock, Mrs. Nona Roberts and John.

Dr. Gill served a three-year term as county supervisor, and was chosen as chairman of the Board. He was a school director for more than 21 years, he was a justice of the peace and a notary public, and he was practically a permanent member of the Republican County Central Committee. He sold his drug store in 1872. Springdale had a Mutual Fire Insurance Company of which he was vice-president.

He was a good natured man, but it was news when he set up four stoves in one day without emitting a single "big, big D." He was acquainted with the president of the Manual Labor Bank in Philadelphia, and had some of the old style "shinplasters" worth 6½ cents which that institution had issued on June 1, 1837. At the other end of the ladder, he was a friend of John Brown, the abolitionist.

Dr. Gill moved to Prairie City, with his wife, in 1890, and died on March 24, 1890, at 78 years of age.

Noah Green came with his parents from Licking County, Ohio, and settled at Rochester on May 19, 1837. Dr. Green began the practice of medicine in 1848, but like so many others he went to California in 1849 and returned in 1852. He married Ann Eliza Bailey, of Columbiana County, Ohio, in 1851. She and their infant son Willie died in 1853.

Dr. Green put up several brick buildings in Rochester. About 1857, a large, three-story brick, steam flouring mill was built on the river bank. It was one of the best steam flouring and grist mills in Iowa, grinding with two runs of stone at the rate of 400 bushels of grain a day. Dr. Green moved to Mechanicsville in 1860.

In 1862, all of the county officers were Republicans with one exception. According to the local press, it was thought kind, if not just, to allow the inquest upon the dead "democracy" to be held by its own friends, and Dr. Noah Green was elected coroner to perform that and other legal rites. The task must not have been congenial, for he moved to Muscatine during that same year, returning to Rochester several years later to pass his last days. He was steadfastly confined for eight months before his death in August, 1869, at 44 years of age. He was buried with Masonic and Odd Fellow rites, and according to the contemporary record, "The lowest estimate of those assembled at his funeral was 1,000, and the procession was at least one mile long." He left a wife and three children. He had his life insured for $2,000.

Dr. J. W. Creese, an eclectic physician, had a business card published in 1853. In 1854, he announced the dissolution of a partnership with Starr in his drug store, and said he would thereafter carry on the business by himself.

It seems that a *Dr. Ingraham,* a botanic physician, came into the Lowden neighborhood in October, 1853. His wife was taken violently ill on October 30, and died on November 3, shortly after midnight. Friends in the neighborhood, suspecting that all was not wholesome in Denmark, decided to investigate. From the evidence taken, it was apparent to the coroner, and to Drs. Chambers and Piatt, that Mrs. Ingraham had been abused. Her husband had threatened to knock her to Texas, and had kicked her off the couch on which she had been resting. The next day, after their examination, the doctors reported they were of the opinion that her death was caused directly or indirectly by the blow that led to the death of the child she was large with. Justice Soper, because the evidence at the trial was inconclusive, decided that the prisoner should go hence, and he did. According to the newspaper, "Perhaps it was well for him, for the odor of tar was in the midnight air, and some imagined they saw feathers in the dark." And that's the story of the first murder in Cedar County.

Alexander and James C. Turner were among the earlier members of the medical profession in the County. Reynolds and Turner published their card in the first issue of the CEDAR COUNTY ADVERTISER, in 1853. In October of the following year, Dr. J. C. Turner had his own office in Quality Row, south of the Tipton courthouse. He formed a partnership with Dr. C. L. Chambers in 1857.

Dr. Turner was elected "king" of the new chapter of the Masonic Order that was instituted under a dispensation in 1857. Early in 1859 he was married, and then he formed a new partnership with Dr. Peter Carpenter that lasted for a few months. He was associated with Dr. H. H. Maynard from 1865 to 1868. He also was a signer of the Fee Bill which was passed by the Iowa and Illinois Central Medical Association in 1869.

Mrs. Turner died on November 2, 1875, at 43 years of age, leaving two children. Dr. Turner apparently was unhappy and even more restless after her death, and in 1883, although everyone loved this gentle man and thought he belonged in Tipton, he sold his six lots for $1,600, closed his office and took up residence with his daughter Lou, whose husband was a flourishing druggist at Beatrice, Nebraska.

Joseph Reynolds, a graduate of Jefferson Medical College, Philadelphia, was associated with Dr. J. C. Turner in 1853, as has been said. However, in October, 1854, he had his own office, and by December of that year he was among the missing. He had packed up and left under a cloud as black as night. The newspaper devoted an entire column to his shortcomings and misdeeds, and the next session of the court was busy with judgments filed against him. He had not only traduced the females consistently, but had managed to fill his pockets with money borrowed from the males.

Dr. H. W. Ross, a physician at Rochester in 1853,

subsequently went to Oregon, but then returned to locate at Wilton.

Dr. Joshua Maynard had been born at Southampton, Massachusetts, July 6, 1797, had removed to Franklin County, Ohio, where in due time he entered the medical profession, and in 1828 had married a Mary Smith. They had two daughters. In 1853, he came to Tipton.

As a youth, he had been an Episcopalian; then he joined the Presbyterian Church; but later, with his wife, he belonged to the Congregational Church. His political allegiances were similarly fleeting. He was a Hard Shell (Whig) Freesoiler when he first came to Tipton, but in 1869 he was a delegate to the Republican State Convention. In 1872, he joined the liberal segment of the Republican Party, and was recommending that there be mass meetings of both sections "so that the speakers might have someone to talk to." In another couple of months, he had gone over completely to the Democratic Party, and the treatment doled out to him by a Republican newspaper was just the sort that such an apostate could expect in that day and place.

He was a member of the Temperance Club, president of the School Board, chairman of the Kansas Relief Committee, and for one term county superintendent of schools. He was assistant assessor for the 7th Division, 2nd District. From the time of his espousal of the Democratic Party until his death on October 9, 1878, at 81 years of age, there is no record of his activities.

Dr. W. A. Piatt, a graduate of Jefferson Medical College, Philadelphia, located in Tipton in 1854, about a month after Dr. Reynolds had removed himself. He came well supplied with references, and was well received. In 1855, he was secretary of the County Democratic Convention.

The parents of *Dr. William C. Dodds* had come to Canada from Derry County, Ireland, and in 1818 had located in Maryland, where he was born, April 5, 1822. The family had then emigrated to Ohio, and settled on a farm in Athens County. William had attended a district school and one term of high school before beginning the study of medicine with a Dr. Fulton, in Amesville, Ohio. In 1850, after four years as a preceptee, he began practice in Rome (now Fostoria), Ohio, but after two years he returned to work with Dr. Fulton for a year.

In June, 1854, he married Mary Ann Phillips, the daughter of Captain and Mrs. Ezra Phillips, of Athens, Ohio, and their wedding trip was a journey by boat down the Ohio River and up the Mississippi to Muscatine. Leaving Muscatine by stage coach, they began to search for a business location and a home. Iowa City was to have been their destination, but circumstances changed their plans, and they located in Cedar Bluffs, on the banks of the Cedar River. They were welcomed to the village by a family named McAfee, whose son had just broken a leg. The McAfees had recently completed a new frame house with white plastered walls, and gratefully offered them the parlor for their new home. By July 4, 1854, Dr. Dodds had laid in his supplies, had acquired a horse to ride, and was ready to respond to calls.

Such a practice meant long rides over a sparsely settled district, throughout hot summers and



The turnkey, an antique instrument like the one Dr. Dodds used for extracting teeth.

cold winters, but in spite of the hardships he continued an active, paying practice for nearly 40 years. During that time, he bought a home, in which he also had his office, and by 1878 he had purchased 75 acres of farmland. Cedar Bluffs was originally called "Gower's Ferry," and when the river was spanned by a bridge, Dr. Dodds was the first person to cross it in a horse-drawn vehicle.

While rearing their six children, Dr. and Mrs. Dodds made several vacation trips to Ohio by boat. Later, as his sons became interested in farming, the doctor accumulated more land, at one time owning nearly 400 acres in Cedar County. After the death of Mrs. Dodds, he made his home with his children, and died at the home of his son Harry on September 15, 1910, at the age of 88 years. One son had died in infancy. The other children were: Mrs. Clara Pfaff, Mrs. Forrestine Laubscher, Mrs. Minnie Benda, and William, Charles and Harry Dodds. There were 17 grandchildren and four great grandchildren at the time of the doctor's death.

Dr. Dodds had a unique method of reducing

fractures. Because x-ray was unknown to him, he had a skeleton that he kept for comparison. His box of real bones remained a curiosity for his young descendants. He often used a turnkey for extracting teeth, a device which can be said to have gouged them out. Appendicitis was a grave dread to him, for it was usually fatal. He knew that surgery was the answer, but he didn't live to learn that appendectomies could be performed successfully. To the best of his family's knowledge, he never set foot in a hospital.

The charges and equivalents listed in his account books are interesting: Delivering a baby—$3; House call—$1.50 (later raised to $2); Physical examination for life insurance (in 1865)—$1. Under his barter system he had established the following equivalents: Cord of wood—$3; 16 gallons of molasses—$12; 2 bushels of potatoes—$.75; and 15 lbs. of beef—$.90. He compounded his own medications and ointments, ordering his supplies from Muscatine: anise, potash, Colambo root, nitre, ergot, whiskey, etc.

One of the county judges, *W. P. Cowan,* was by profession a physician. It is a little difficult to understand how he could have engaged in both of his occupations at the same time. He stated in his medical card that he would practice "Plastic Surgery, Supply Deficiencies and Remedy Defects." Since he was associated with one of the better physicians, it must be assumed that he was proficient.

Doctor-judge Cowan believed strongly that none but native-born citizens should hold office under the U. S. government. He was a Temperance man, but argued that the use of intoxicating drinks should be granted under certain conditions. He started his medical practice in Tipton in 1856, and was elected to the judgeship in 1859.

Drs. J. D. McClure and *W. S. Scott,* graduates of Jefferson Medical College, Philadelphia, placed their medical cards in the January, 1856, issue of the newspaper, replete with a long list of references. They, too, were mindful of their fellow alumnus, Dr. Reynolds. Drs. McClure and Scott formed a partnership, but during the following summer Dr. Scott, with his wife, returned to Wheeling, Virginia. His wife was not in good health. The editor said he thought it refreshing "when so many were absconding, particularly among the M.D.'s, to have one go with the good feeling the Doctor had." It showed, he said, that the medical profession was not all bad!

Dr. D. F. Abger opened the first drug store in Mechanicsville, in 1857. Dr. Abger remained there several years, and was active in the Ioneer Township Republican Club.

Dr. Erastus B. Bills, who came in September, 1855, was the first physician in Durant. He had graduated from Yale Medical College in 1854. He was the town's second postmaster, and in April, 1857, was elected justice of the peace. The office had been held by one individual before him, but on account of some informality in the election, that predecessor had never tried a case. Thus, Dr. Bills was a legal pioneer in his community, and since the village was situated in the corner of Cedar County, he had more than his share of court business, since culprits sought refuge there from both Scott and Muscatine Counties.

Dr. Bills put up the second building in Durant to use as an office, but rented it to a Mr. Cunningham to use—of all things—as a hotel. It was somewhat crowded on some occasions, with 12 or more patrons occupying a 12′ x 16′ structure. Dr. Bills was a good businessman, owned considerable property, including a drug store, and in 1880, put up a telephone line between his office and drug store and his residence. He served in the Senate of the State Legislature.

Dr. M. Mayer represented a set of avocational interests quite different from that of any of his predecessors. A homeopathic physician graduated from the University of Leipsig and a member of the Hahnemann Society of London, he was a former professor at Lawrence University, Appleton, Wisconsin. He located in Tipton on August 22, 1857. He was the author of LEAVES FROM THE DIARY OF A PHYSICIAN, and three stories from that volume, "The Betrayed," "The Gambler" and "The Dud," were republished in the TIPTON ADVERTISER. He had a good style, and the tales were interesting. Furthermore, he was a forceful speaker, and was much in demand by the debating societies and the Lyceum.

Dr. E. H. Reigart, born at Williamsburg, Pennsylvania, December 26, 1834, and a graduate of the Philadelphia Medical College, came to Tipton in 1856. For a short time, he was associated with Dr. J. F. Kennedy, but at the outbreak of the Civil War he was commissioned assistant surgeon of the 35th Iowa Infantry. He returned after only a single term of service, but moved to Lowden in 1872, and finally located in Des Moines, where he died on February 28, 1899. He was a Republican, was a member of the Methodist Church and was buried in the Tipton Masonic Cemetery.

In 1858, *Mrs. L. S. Campbell* announced herself as a hydropathic physician. She was fully convinced that drugs were unnecessary in the treatment of disease, and indeed absolutely injurious. Her office was at Seventh and Lynn Streets, in Tipton. After making "lots of friends in Tipton," as the newspaper reported it, she moved to Onion Grove, later known as Clarence.

Dr. Prentiss B. Clark was the first physician to locate at Inland, starting practice there in about 1858. He was commissioned an assistant surgeon of the 8th Iowa Infantry on September 18, 1861, but was forced to resign on January 31, 1862, because of ill health. He was again commissioned as an assistant surgeon of the 2nd Consolidated Veteran Infantry on March 5, 1865, and was mustered out on July 12 of that year.

Dr. Clark was secretary of the Cedar County School Convention in 1870, and in 1872 had charge

of the open discussion at the School Institute. The wagon shop of P. B. Clark & Co., established in 1873, was "prepared to do all kinds of work usually done in a wagon shop and on short notice." In September, 1874, Dr. Clark sold his village property—12 acres—to Ellen Cotton, wife of Dr. N. B. Cotton, for $3,000. He then relocated at Tabor, Fremont County, Iowa.

Dr. J. F. Kennedy, of Williamsburg, Pennsylvania, a graduate of the New York University Medical School who had previously attended lectures at the Jefferson Medical College, Philadelphia, located at Tipton on July 1, 1858. On July 17, 1858, he married Miss M. C. Reigart, the daughter of Henry Reigart, who owned the drug store over which he had his office. In March, 1859, he moved to Mechanicsville, where he was practicing when a tornado struck the town, in 1860.

Dr. Kennedy returned to Tipton in 1861, and in July of that year was made an assistant surgeon in the regular army. Because, like so many others of his calling, he was not overburdened with this world's goods, he had some difficulty in buying his military outfit. His friends in Tipton and Mechanicsville helped out by raising enough money to buy a sword for him.

He returned to Tipton in December, 1863, and took over the office and residence of Dr. Cowan. He was secretary of the Loyal League, Soldiers' Aid Society; vice-president of the Committee for the Auxiliary of the Iowa State Orphans' Home; an agent for Bayliss College, at Dubuque; president of the Cedar County Bible Society for several years, and a member of the Committee for the Cedar County Temperance Reunion.

In December, 1869, Dr. Kennedy was elected to a professorship in the Medical College at the State University of Iowa and was given the chair of obstetrics, but his duties were to consist of only four lectures each week and thus didn't necessitate his leaving Tipton. He resigned from the S.U.I. faculty in September, 1870, and moved to Des Moines, where he helped establish the Iowa Polytechnic School. The 10 professors there taught, among other things, Natural Mathematics, Mechanical Science, Medical Science, Modern Languages and English Literature. J. F. Kennedy, M.A., M.D., was professor of anatomy and physiology.

He was secretary of the State Board of Health for 25 years. In 1871, he wrote to his colleagues in Tipton about an ISMS meeting at which over 100 M.D.'s had been present. He urged them to send representatives to future meetings, saying that they would compare favorably with doctors from any other area. On July 26, 1891, he sailed for Paris, where he had the honor of representing Iowa at the World's Medical Congress.

(To be continued)

Coming Meetings

(Continued from page 572)

Sept. 17	**Santa Barbara County Heart Association Physician Symposium.** Biltmore Hotel, Santa Barbara
Sept. 18-19	**New England Society of Anesthesiologists.** Bretton Woods, New Hampshire
Sept. 18-21	**Second International Meeting of Forensic Pathology.** New York City
Sept. 18-25	**Third European Congress of Cardiology.** Rome, Italy
Sept. 19-23	**Hematology and Radioisotopes (American College of Physicians).** Ohio State University College of Medicine, Columbus
Sept. 19-23	**Pediatric Surgery.** Cook County Graduate School of Medicine, Chicago
Sept. 19-23	**Surgery of Colon and Rectum.** Cook County School of Medicine, Chicago
Sept. 20-22	**Kentucky State Medical Association.** Louisville
Sept. 20-23	**Utah State Medical Association.** Hotel Utah Motor Lodge, Salt Lake City
Sept. 22-24	**Advances in Surgical Anatomy, Normal Anatomy and Histology of the Eye.** University of California, San Francisco
Sept. 22-26	**International Cancer Cytology Conference.** Madrid, Spain
Sept. 23-25	**California Society of Internal Medicine Annual Meeting.** Yosemite
Sept. 23-25	**Inter-Society Cytology Council.** Palmer House, Chicago
Sept. 23-27	**College of American Pathologists.** Palmer House, Chicago
Sept. 24-30	**Annual Otolaryngologic Assembly.** University of Illinois College of Medicine, Chicago
Sept. 24-Oct. 2	**American Society of Clinical Pathologists.** Palmer House, Chicago
Oct. 28-29	**Yale School of Medicine Sesquicentennial.** Yale University, New Haven
Oct. 30-Nov. 2	**Sixty-Seventh Annual Convention of the Association of Military Surgeons.** Mayflower Hotel, Washington, D. C.
Oct. 30-Nov. 3	**Southern Medical Association.** St. Louis
Oct. 30-Nov. 4	**American Fracture Association.** El Presidentia Hotel, Mexico D.F.
Oct. 30-Nov. 4	**American School Health Association.** San Francisco
Oct. 31-Nov. 2	**Association of American Medical Colleges.** Diplomat Hotel, Hollywood Beach, Florida
Oct. 31-Nov. 3	**Interstate Postgraduate Medical Association of North America.** Pittsburgh-Hilton Hotel, Pittsburgh
Oct. 31-Nov. 3	**Omaha Mid-West Clinical Society.** Civic Auditorium, Omaha
Oct. 31-Nov. 3	**Southern Medical Association.** St. Louis
Oct. 31-Nov. 4	**Radiology for Specialists.** Center for Continuation Study, University of Minnesota
Oct. 31-Nov. 4	**American Public Health Association Annual Meeting.** San Francisco
Oct. 31-Nov. 4	**Below-Knee Prosthetics.** University of California at Los Angeles
Oct. 31-Nov. 11	**Gynecology, Office and Operative.** Cook County Graduate School of Medicine, Chicago

Iowa Chapter of the American Academy of General Practice

TWELFTH ANNUAL MEETING AND SCIENTIFIC ASSEMBLY

Hotel Savery, Des Moines, September 18, 19, and 20

The Iowa Chapter of the American Academy of General Practice will hold its Annual Meeting and Scientific Assembly at Hotel Savery, Des Moines, September 18, 19 and 20, 1960.

The Annual Meeting of all members for the transaction of necessary business and election of officers for the next fiscal year will be held at 3:00 p.m. on Sunday, September 18. There is no planned activity for the evening following that Sunday afternoon session.

The Scientific Program Committee, after the necessary months of planning, has again formulated a very interesting and informative Scientific Assembly for Monday and Tuesday, September 19 and 20. There will be 36 technical exhibitors presenting displays for the benefit of attending physicians. Plan to visit with those men and to question them about their products. Time will be allotted during each morning and afternoon session to visit the exhibits.

The wives of our members are most cordially invited to attend the meeting. They are most welcome to attend the scientific lectures, and are invited to attend the luncheon each day. A Hospitality Room will be maintained at the Savery Hotel for the use of the ladies, as in past years.

Luncheons are planned for Monday and Tuesday, September 19 and 20. The speakers and their subjects at those gatherings have been selected in an effort to appeal both to physicians and to their wives.

On Monday evening, September 19, following a social hour, a buffet dinner will be served at the Hotel Savery. Entertainment will follow.

Registration for the meeting will begin on Sunday afternoon on the Mezzanine Floor of the Hotel Savery. Luncheon and dinner tickets will be on sale, and should be purchased at the time of registration. A total of 12 hours of Category I credit will be granted to Academy members who attend all sessions of the Scientific Assembly.

All Academy members are urged to attend, and non-member physicians are also cordially invited. There is a daily registration fee for non-members, but there is none for AAGP members, interns or ladies.

Following is the complete program:

Sunday, September 18

Annual Meeting for all Members—3:00 p.m.
Des Moines Room, Hotel Savery

Monday, September 19

8:00 Registration
8:30 Movie Film
9:00 Invocation
Greetings from Polk County Medical Society
Greetings from Iowa State Medical Society
9:15 "Disturbances in Urinary Function Related to Life Stress"—Stewart Wolf, M.D., Oklahoma City, Okla.
9:45 "Practical Gynecology"—Mitchell J. Nechtow, M.D., Chicago, Ill.
10:15 VISIT EXHIBITS
11:00 "Therapy of Drug Induced Coma"—John Adriani, M.D., New Orleans, La.
11:30 "Life Stress and the Hemodynamics of Essential Hypertension"—Dr. Wolf
12:15 LUNCHEON—"The Therapeutic and Training Program of Glenwood State School"—Peter A. Peffer, M.D., superintendent
2:00 Committee on Conservation of Hearing of the State of Iowa
"Help for the Hard of Hearing Children"
Panel: Byron Merkel, M.D., Des Moines, Iowa
James Curtis, Ph.D., Iowa City, Iowa
Paul F. Chesnut, M.D., Winterset, Iowa
3:15 VISIT EXHIBITS
3:45 "Abnormal Bleeding in Gynecology"—Dr. Nechtow
4:15 "Fallacies & Misconceptions Concerning Anesthesia for Infants and Children"—Dr. Adriani
4:45 Panel Discussion
6:30 Hospitality Hour
7:00 Buffet Dinner
8:30 Program and Entertainment

Tuesday, September 20

8:00 Registration
8:30 Movie Film
9:00 "Treatment of Common Lacerations and Facial Injuries"—T. J. Litzow, M.D., Rochester, Minn.
9:45 "Management of the Chronically Anxious, Hypochondriacal Patient"—Beverley T. Mead, M.D., Salt Lake City, Utah
10:15 VISIT EXHIBITS
11:00 "Management of Children With Diabetes Melli-

tus"—Robert L. Jackson, M.D., Columbia, Mo.
11:30 "Planned Labor"—Ralph A. Reis, M.D., Chicago, Ill.
12:15 LUNCHEON—"The Battle Between the Sexes and How to Reduce Skirmishes in Office Practice" —Dr. Mead
2:00 ERNEST E. SHAW MEMORIAL LECTURE
"The Family Doctor and His Problem Eye Cases"—Malcolm A. McCannel, M.D., Minneapolis, Minn.
2:45 "The Problem of Spontaneous Abortion"—Dr. Reis
3:15 VISIT EXHIBITS
3:45 "Nutritional Care of Infants and Children"—Dr. Jackson
4:15 Panel Discussion



Mental Health

The Present and Future Of Our Institution Program

WILLIAM C. WILDBERGER, M.D.

WOODWARD

One cannot think and plan in terms of the future unless and until he understands the present. Similarly, one cannot comprehend the present situation except as a product evolved out of the past.

In the case of an institutional program for the care and management of the mentally retarded, the problem goes even deeper and farther than these factors. The basic definition of mental retardation itself, and the basic function of institutions that care for people with that affliction, are themselves variables, and in consequence the equation—if we may think of the subject mathematically for a moment—is immediately thrown into the realm of probability theory, since *all* are variables and there are *no* "knowns."

For example, is the multiple-handicapped child to be thought of as mentally retarded, even though he was born with a severe physical and neurologic maldevelopment defect and has never developed any mental function from which he could become retarded? If so, are his needs not for a type of nursing-home care, instead of a hospital-school? Isn't he to be contrasted against the minutely brain-damaged child who is physically and neurologically intact, but is damaged in his frontal lobes and therefore cannot evolve beyond a certain level of intellectual attainment? The latter of these can be trained, and of course does need a hospital-school orientation, yet it should be noted that there are individuals with all of the possible combinations of physical and mental equipment.

Turning to the institution, is its function to be merely that of a boarding home—i.e., a home-away-from-home? Is it to function as an infirmary in a medical sense? Is it to act as a hospital for the treatment of chronic nervous diseases? Is it to function as a school or as a hospital-school?

These fundamental questions need to be answered more specifically than we have thus far succeeded in answering them, and it seems to me that they are by no means merely academic. This isn't just a matter of semantics, for the answers will determine the characters of our institutions and the content of their future programs.

THE PAST

In the past, the intended functions of residential institutions for the mentally retarded have consisted of (1) training the more intelligent patients for living in the community, and (2) custodial care or, better, protective care of the less intelligent patients for the remainders of their lives. Un-

Dr. Wildberger, the clinical director of the Woodward State Hospital-School, gave this address at the Eighth Annual Meeting of the Iowa Association for Retarded Children, in Sioux City on June 4, 1960.

fortunately, the general trend in institutional populations has been such that the role of the institution was mostly one of containment of individuals who had been rejected by family, friends, professionals and society in general, though there have been various combinations as well as degrees of that rejection. Under this philosophy, not only the retardates but also the institutions that housed them were rejected—so much so, in fact, that the very words *institution* and *institutionalization* have acquired unsavory connotations. As a result, there is an increasing tendency to regard only the most severely retarded as proper subjects for institutional care. As a result, more and more hospital-schools over the country began seeing themselves relegated to a custodial role. As these institutions were rapidly filled, other facilities were requested.

The position of the Woodward State Hospital-School was little different from the national average of such institutions, except perhaps that because Iowa is a more rural and less industrialized state than many of the others, Woodward became a catch-all. Specifically, Woodward State Hospital-School was asked by the courts, the social welfare departments at the county level, physicians, parents, teachers and society in general to perform as the following:

1. A hospital for epileptics
2. A hospital for the severely mentally retarded
3. A hospital for the severely mentally and physically handicapped
4. A school for school-aged and mentally normal but epileptic children
5. A school for school-aged, mentally retarded children
6. A rehabilitation center for the mentally retarded beyond school age
7. A rehabilitation center for emotionally disturbed children who are functioning for the time being at a psychologically retarded mental level
8. A rehabilitation center for delinquent youths who are functioning for the time being at a psychologically retarded level
9. A rehabilitation center for defective delinquent youths for whom we have no maximum security facilities
10. A rehabilitation center for patients with personality disorders and lowered I.Q. functional levels
11. A rehabilitation center for criminally delinquent youths who have temporarily suppressed I.Q.s.

THE PRESENT

We remember well that there was a time, not too long ago, when retarded persons were sent to institutions because there was nothing in the community for them. Now, all this is changing. Parent groups all over the country have played a large part in the change. In many localities, there are special classes for trainable children, in addition to the slow-learning classes in the public school systems for the educable group. Although fewer, there are growing members of day nurseries, day-care centers, sheltered workshops or occupational centers, and special recreational programs.

As an obvious corollary to the creation of these resources at the local community level, the role of the institution is changing—or, more accurately, is beginning to change. The institution is becoming *one part* of the total community resources for the mentally retarded, rather than the *only* service or available plan of care. Thus, we see that the institution must be thought of and included within the totality when one speaks of the broad field of total community resources for the mentally retarded. It is our contention that patients should come to the institution for specific complex hospital-school rehabilitative procedures and for specific lengths of time, as a supplement to the procedures available at the local level or as a substitute for the procedures still unavailable there. Thus there can be a dynamic continuum of resources and care-management in which the hospital-school can play a dynamic rehabilitative role.

The institution should not be isolated, treated as an isolated entity or thought of as a dead-end, or used for disciplinary purposes as if it were a reformatory or a prison. Rather, it must become part of the many faceted program for the care and training of the mentally retarded. It must be dynamic in scope and in leadership, developing a constructive, rehabilitative philosophy and a policy of its own for benefiting the patient and the family, the community and the state as well!

Admissions to and discharges from an institution cannot be dealt with appropriately, to be sure, apart from a consideration of the community environment, with its social processes, attitudes and resources. The two "ends" of institutionalization—preadmission at the one end, and release and aftercare at the other—depend equally for their effectiveness upon the kinds of services that are available in the community and upon those that can be provided by the institution.

A good preadmission program is essential, so as to eliminate the waiting list by culling from it the persons who can be cared for just as well or better elsewhere.

A good and strong release and aftercare program is essential in getting people out of the institution who no longer need to be there, or who have benefited maximally from the program there and would be better off if they were back in the community.

This is the broad philosophy and policy we have established, have implemented and are pursuing at present at the Woodward State Hospital-School.

THE FUTURE

The future of the institution in the care and management of the mentally retarded is a challenging subject. It would be a brave man indeed who would attempt to pinpoint the future role of

the institution. By means of research, the incidence of mental retardation can, perhaps, be reduced appreciably. There have already been a few advances in that direction, and our long-range goal should be to prevent mental retardation through medical, social, educational and other means. This could mean that the need for the institution would eventually disappear. Then hospital-schools for the retarded could close their doors, as tuberculosis sanatoriums are doing today. Already, hospitalization for epileptics of normal intelligence is becoming unnecessary, with the advent of better treatment drugs and management methods.

At the present time, the emptying of our institutions for the mentally retarded seems improbable, but by no stretch of the imagination is it an impossibility. Yet, taking the more conservative point of view, I see the following in the future for the institution:

1. The institution must use effectively a better nomenclature than we have available today, must be able to diagnose more accurately than at present—not only gross variations but also more detailed biochemical variations—and must put all these data into a more usable form.

2. The institution must become a true hospital-school in the modern sense. Such an institution will not reach true hospital-school status merely by acquiring staff members who give service in ever-increasing areas of the patient's life. An institution must provide a setting for detailed study of the individual patient, developing not only a symptomatic portrayal of his condition but, more importantly, seeking to relate symptoms to basic causative factors—genetic, psychological, physical, social and biological. Then treatment should and must follow rapidly—complete treatment involving all of the indicated areas. There is room for detailed clinical research as well as for laboratory studies in these institutions, and new understandings and new technics must be applied in that work.

3. The institution—the better hospital-school of the future—will be available for more selective and more constructive use, in proportion to the numbers and capacities of additional community resources that are set up.

4. Many people are convinced—and I quote one of the leaders in the field of care for the mentally retarded—"that the institution of the future, to fulfill its purpose adequately, must be able to admit its patients more rapidly, without long periods of time on waiting lists, to bring the patient into a controlled therapeutic environment without mass grouping of persons, and to approach these patients medically, nutritionally, psychologically and educationally in a manner generally unknown to us today. It would seem that the length of institutional stay should be shortened extremely and the patients returned to their homes and community for continuing care long before the patient has been completely, emotionally, expelled from membership in the family group, and before the patient and his family become dependent upon the institution. This would undoubtedly mean additional responsibility for the family and for the community, and would no doubt mean closer collaboration between the institution and community facilities, and reorienting and encouraging the family in continuing treatment. This would undoubtedly also mean frequent short-time readmissions of these patients to the institution for additional therapy. To advocate such a radical program of treatment, I am certain would produce severe resistance on the part of many families and most community agencies. Such an institution would also require a more efficient team of individuals, using better technics, studying their patients more completely, using less empirical treatment and using treatment modalities at present unknown."

5. Finally and obviously, a deliberate, constructive, complete program requires lifetime planning for the mentally retarded individual. Many states have long recognized this need and have developed an Inter-Agency Committee on Mental Retardation to promote even closer relationships among the following: State Mental Health Program; State Public Health Department, Division of Maternal and Child Health; State Department of Social Welfare, Division of Child Welfare; State Department of Public Instruction, Division of Special Education, and Division of Vocational Rehabilitation; State Association for Retarded Children; and representatives from other voluntary health and social agencies and local, county and community public agencies. *This Iowa needs!*

SUMMARY

The past, present and future roles of the institution have been reviewed, presented and previewed with the thought that the role should be rehabilitative, dynamic and closely geared with the greater community resources.

The staff, together with the personnel of other agencies, should exert leadership in helping communities to understand the problems of the mentally retarded and to develop programs for them.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 23-26, 1961

Veterans Memorial Auditorium

Des Moines

STATE DEPARTMENT OF HEALTH

Edward D. Zimmer
COMMISSIONER

POLIOMYELITIS

IOWA—1960

January 1 through July 31

January	Des Moines County—one paralytic case, 21 years, no vaccine
February	Winneshiek County—one paralytic case (death), 7 years, no vaccine
June	Ida County—one non-paralytic case, 29 years, vaccine unspecified
	Polk County—one non-paralytic case, 18 years, vaccine unspecified
	Webster County—one non-paralytic case, 16 years, 4 injections
	Woodbury County—one non-paralytic case, 7 years, 3 injections
July	Polk County—one non-paralytic case, 28 years, vaccine unspecified
	Worth County—one paralytic case, 14 months, vaccine unspecified

Participating in the poliomyelitis surveillance plan that is being uniformly carried out throughout the United States, the State Deparment of Health is making initial and 60-day investigations of all reported cases of poliomyelitis or suspected poliomyelitis. Since the last six cases have almost all occurred within the last 60 days, the information on vaccination status is incomplete.

Although there have been few cases of poliomyelitis or of virus infections simulating poliomyelitis in Iowa this year, the use of the poliomyelitis vaccine has been good. It will be remembered that from May of last year until the outbreak of poliomyelitis in Des Moines in the middle of June, physicians could find very few persons interested in getting poliomyelitis vaccine. The interest aroused by the Des Moines and Polk County outbreak subsided last year almost simultaneously with the newspaper announcement that the peak of infection was over in Polk County. Contrary to that situation, vaccine use this year has continued at a good level, with 20,000 to 35,000 cc. of vaccine sold in Iowa each week from May until the present date.

MORBIDITY REPORT FOR MONTH OF JULY 1960

Diseases	*1960 July*	*1960 June*	*1959 July*	*Most Cases Reported From These Counties*
Diphtheria	0	0	0	
Scarlet fever	99	159	103	Linn, Johnson, Polk
Typhoid fever	3	1	0	Dubuque, Scott, Wapello
Smallpox	0	0	0	
Measles	84	282	90	Dubuque
Whooping cough	3	15	62	Crawford, Des Moines, Polk
Brucellosis	13	23	13	Scott
Chickenpox	131	423	48	Dubuque, Scott
Meningococci meningitis	0	1	1	
Mumps	288	645	52	Dubuque, Scott, Story
Poliomyelitis	2	4	96	Polk, Worth
Infectious hepatitis	20	16	13	Ida, Shelby, Woodbury
Rabies in animals	17	15	24	Story, Washington
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	40	32	20	For the state
Syphilis	120	71	73	For the state
Gonorrhea	150	113	90	For the state
Histoplasmosis	0	0	0	
Food intoxication	0	0	0	
Meningitis (type unspecified)	0	2	0	
Diphtheria carrier	2	0	0	Boone
Aseptic meningitis	2	1	5	Kossuth, Polk
Salmonellosis	7	5	2	Dallas, Polk
Tetanus	0	0	0	
Chancroid	2	1	1	Linn
Encephalitis (type unspecified)	0	2	0	
H. influenzal meningitis	0	0	0	
Amebiasis	0	0	3	
Shigellosis	2	1	3	Calhoun, Davis
Influenza	0	2	0	

NEWLY REPORTED TUBERCULOSIS CASES, UNITED STATES, 1959*

State	Newly Reported Tuberculosis Cases		
	TOTAL REPORTED	ACTIVE AND PROBABLY ACTIVE	
		Number	Rate Per 100,000 Population
Total United States	78,127	59,230	33.0
Alabama	2,055	1,636	51.2
Arizona	809	802	65.0
Arkansas	891	770	44.2
California	5,752	5,251	35.9
Colorado	785	300	17.8
Connecticut	517	352	14.6
Delaware	157	135	29.7
District of Columbia	786	650	77.4
Florida	1,618	1,029	21.6
Georgia	1,386	1,221	31.8
Idaho	134	81	12.2
Illinois	6,199	4,163	40.8
Indiana	1,739	1,297	28.0
Iowa	386	303	10.8
Kansas	360	268	12.5
Kentucky	1,212	1,188	38.0
Louisiana	1,192	1,074	33.9
Maine	164	160	16.9
Maryland	1,639	1,430	47.2
Massachusetts	1,681	1,655	33.4
Michigan	5,073	2,602	32.7
Minnesota	1,056	551	16.2
Mississippi	896	781	35.7
Missouri	1,416	1,297	30.6
Montana	215	173	25.2
Nebraska	132	131	9.0
Nevada	125	106	37.9
New Hampshire	92	78	13.2
New Jersey	2,834	1,704	28.7
New Mexico	591	470	53.5
New York	7,428	7,151	43.4
North Carolina	1,472	1,095	24.2
North Dakota	109	109	17.0
Ohio	4,157	2,670	27.5
Oklahoma	766	605	26.6
Oregon	605	541	30.6
Pennsylvania	5,829	3,952	34.9
Rhode Island	296	237	27.1
South Carolina	964	713	29.5
South Dakota	135	130	18.9
Tennessee	2,331	1,545	44.1
Texas	4,251	2,582	27.1
Utah	115	81	9.2
Vermont	103	78	21.0
Virginia	1,572	1,367	34.2
Washington	1,032	745	26.4
West Virginia	655	595	30.3
Wisconsin	1,289	797	19.9
Wyoming	96	58	18.2
Continental United States	75,108	56,709	32.2
Alaska	464	359	188.0
Hawaii	357	226	34.5
Puerto Rico	2,198	1,936	82.0

* Provisional data as reported on the semi-annual tuberculosis morbidity reports. The rates are per 100,000 population, based on provisional population estimates as of July 1, 1959, published by the Bureau of Census in Series, p. 25, No. 210.

Although the general trend of new cases is downward, there has been a wide variations in any given year among the states in the percentage of decrease. In some instances there have been increases. A comparison of these provisional data for 1959 with the final data for 1959 shows that the number of cases decreased by more than 10 per cent in 24 states, and by less than 10 per cent in 14 states. The number of new active cases increased in 11 states, and in five of those 11 the increase was greater than 10 per cent. In the past, the increases observed in any year have been temporary aberrations in the long-term downward trend. Although they may have important program implications, none of these increases have yet foreshadowed a continuing increase in tuberculosis incidence.

PROPOSED CHANGES IN DRUG LABELING

Stronger regulations to insure that physicians receive adequate information about the drugs they prescribe and to insure the safety of new drugs were proposed on July 22 by the U. S. Food and Drug Administration.

The new rules would (1) require virtually all prescription drug packages and printed matter distributed to physicians to promote the sale of a drug to include complete information for professional use of the drug, including information about any hazards, side effects or necessary precautions. Heretofore, the FDA said, such detailed information has not been required when it was available in scientific literature or was available to the physician on request. The only exceptions under the new rules would be for medicines commonly familiar to doctors.

(2) The new regulations would keep a new drug off the market until the manufacturer's represen-

tations regarding the reliability of manufacturing methods, facilities and controls had been confirmed by a factory inspection by the FDA.

Other proposed labeling changes would require injectables and products for use in the eyes to bear quantitative declarations of all *inactive* ingredients, and labels of all prescription drugs would carry an identifying lot or control number from which it would be possible to determine the complete manufacturing history of the drug. Further, the information issued with the drug would have to be dated.

Interested persons are invited to submit written comments on the proposed regulations to the Hearing Clerk, Department of Health, Education and Welfare, Room 5440, 330 Independence Avenue S.W., Washington 25, D. C., before November 22.

TETANUS IMMUNIZATION, A SAFETY FACTOR

Tetanus immunization is as important for the older child and for many adults as it is for the smaller child. Younger children are routinely given triple toxoid immunizations and boosters. Pertussis immunizations are usually not considered necessary beyond the early school years.

In only a small percentage of children are diphtheria-tetanus immunizations or boosters carried beyond the 10-year age level. Nationally, our only tetanus-diphtheria immunized groups beyond the 10-year age period are persons who have recently been in the armed services, and even these persons fail, after their discharge from service, to obtain the needed boosters to keep their protection at proper levels.

The fatality rate of tetanus cases is high, even with the best of medical care.

REPORTED TETANUS CASES AND DEATHS
1947 TO 1957 IN THE UNITED STATES

(Source: National Office of Vital Statistics)

Year	*Cases*	*Deaths*	*Death-Case Ratio (Deaths Per 100 Cases)*
1947	560	511	91.2
1948	601	506	84.2
1949	579	398	68.7
1950	486	336	69.1
1951	506	394	77.9
1952	484	360	74.4
1953	506	337	66.6
1954	524	332	63.4
1955	462	265	57.4
1956	468	246	52.6
1957	447	279	62.4
1958	445		

Very few of these cases are in our two groups with best immunity—young children and men who have served in the military.

Many of Iowa's tetanus cases follow minor accidents or injuries involving breaks or penetrations of the skin. For example, one death occurred in a person who cut his hand on a scythe. One can't run to a doctor's office every time he falls off a bicycle and scuffs a leg, every time he pricks his finger with a rose thorn or every time he injures a hand while repairing a barbed-wire fence. However, there would be no danger of tetanus if we kept our tetanus immunizations at a functioning level. Remember: a case of tetanus represents a failure in preventive medicine!

The "active" type of tetanus immunization done in advance of any emergency will avoid the emergency use of the "passive" type of immunization in which antitoxin is used. Furthermore, many people are allergic to the antitoxin, and it gives protection for only a few weeks.

For older age groups, tetanus immunizations may be given along or combined with diphtheria immunizations. For the combined immunizations, newer types of diphtheria-tetanus material are available. These contain "adsorbed diphtheria toxoid," an effective antigen with a low incidence of undesirable reactions.

For active tetanus immunization of persons over 10 years of age, tetanus toxoid (precipitated or adsorbed) is used. Two injections of 0.5 cc. each are given intramuscularly at four- to eight-week intervals, and are followed by a third 0.5 cc. injection one year later. In civilian practice, as regards tetanus and typhoid immunizations, we are inclined to follow the policies of the United States Armed Forces because of their extensive experience in these fields. Therefore, we recommend as they do that recall or "booster" injections be given every four to five years. (The booster response is rapid. It appears in about five days.) The American Academy of Pediatrics considers eight to 10 years after the last injection as the limit for which booster injections can be relied upon with any degree of surety.

All adults should be protected against tetanus by having tetanus immunizations and by having boosters every four to five years.

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 529-36th Street, Des Moines 12, Iowa.

Woman's Auxiliary News

JOURNEYS IN JULY

On July 10-13, I attended a workshop on "Creativity" at Iowa State Teachers College. The three-day session made us aware of new evaluations, new measuring devices for determining what is a good education. Classroom emphases are changing. The following article should crystallize what concerned us. It was written by Mr. George Holmes, the official planner for the meeting, and it is a clear, concise statement of the thesis. Be sure to read it. After all, your organization invested eight dollars to be represented at the meeting, and this is an attempt to share its results with you. Did your school administrators attend? As responsible citizens in our communities, we should keep watchful eyes on our schools. They should teach our children HOW to think, not WHAT to think!

On July 22 I totally ignored my husband's birthday in order to go, with Hazel Lammey, to a School Health Workshop, at Clear Lake. Dr. Jack Spevak, of Des Moines, very ably represented the Iowa State Medical Society there.

The meeting was directed by the State Department of Health, and was concerned, essentially, with improving school health through inter-agency cooperation. Leaders in all health fields had been invited, and each described his group's particular contributions in this area. Duplication of effort, as well as interdependence, was evident. Certainly more meetings are warranted, for the formulation of concrete plans for better cooperation.

—Mrs. R. F. Nielsen
President

CREATIVITY: THE PRECIOUS PRODUCT OF EDUCATION IN A FREE SOCIETY

This statement was the thesis of the 11th Annual Public Relations Workshop at Iowa State Teachers College on July 10-13.

Life is essentially creative. Like a vine, the human creature reaches out his tendrils of thought and action, seeking to find support for future growth. Many tendrils are sent out, but only a few find support and brace the vine in its upward reach. Those which find no support wither and die. But the essential reach of the plant is always toward the light.

Thus, the human creature in his earliest years reaches out instinctively. Unless he finds encouragement and support for his interests and talents, he soon withers.

Teachers in the schools, parents in the home, citizens in the community should encourage the instinct for self-improvement, and not discourage it. All too often, the child who gives the "right" answer is praised, whereas the child who gives queer and unusual or incomprehensible answers is frowned upon. The so-called "academically gifted" student thus often becomes the one who can read and write, and understand and return precisely what the teacher, parent or book gave to him. There is no creativity involved.

The child who asks "difficult" questions, or gives unusual answers, is thought to be the "odd" one, the "trouble-maker," the one to whom some teachers say, "Why in the world did you ask that question?" or "That's not the answer I had in mind."

The creative child is the one to whom parents often say, "What an odd idea! Where on earth did you get such a crazy notion?"

Only in a truly free society can creativity flourish most abundantly. Conversely, the encouragement of creativity in all areas of life is essential for the preservation of such a society. Only as men are free to develop their talents to their highest potential, in whatever direction they may lie, can the ultimate aims of the free democratic society be achieved. In turn, unless a free society encourages human development and growth, it soon loses the vitality and strength it needs to preserve itself.

On all sides, today, we see alarming threats to the survival of freedom. We see the constant extension of militant, imperialistic communism and its relentless pressure to dominate the world. We see the spectacular sputniks, the military and material might achieved by a society that eschews widespread freedom for the human soul. There are those who question whether complete freedom to think, to dream and to create new ideas is, after all, essential.

Yet no free man should pause, nor should he wonder. These states are organized for war, not for peace. In spite of their cynical use of the title "democracies," they are, in fact, politico-military dictatorships. There is no choice for their citizens, whether to carry guns, act as saboteurs, or to serve as infiltrators, rabble-rousers or assassins. They have no choice but to obey high communist command.

But these states are not invincible. Powerful

terroristic societies of the past have gone down to defeat. They have conquered nearly half the world, yet have passed into oblivion because they failed to satisfy the human need for freedom to grow, freedom to dream and freedom to create. A society that trades on terror can never provide a home for the blossoming of the creative spirit broadly among its citizens.

The plea of the workshop was that teachers, parents and citizens be alert to encourage and reward real creativity. Again, we say that creativity is the free society's most precious asset. It is the germinal instinct that makes an individual as well as a free society grow. We must encourage it at all points, and never discourage it.

HIGHWAY SAFETY

The newspapers, one evening last month, told of an accident just over the Iowa border in Minnesota that had caused the deaths of nine adults and had made 38 children motherless. The next day, the radio told of four more persons who were killed just over the Iowa border in South Dakota. This kind of news depresses all of us, and I hope will particularly alert all of our Auxiliary safety committees to action.

We need to review some of the requirements of accident prevention. Our old friends the three E's (Engineering, Enforcement and Education), along with the other four basic concepts contained in the action program of the President's Committee for Traffic Safety—Laws and Ordinances, Motor Vehicle Administration, Accident Records, and Public Information and Support.

It is also necessary for us to consider psychological aspects. Too many of our drivers are aggressive, impulsive and indifferent. They become preoccupied while driving with problems of health, home, work and money. As a result they are less alert to environmental hazards, less able to utilize effectively the knowledge, judgment and skills they may have had previously for safety on and off the road.

In this area, our doctors perform a valuable service by detecting emotional problems and recommending proper treatment for the patients' safety, thereby eliminating hazards to others. Another area where our doctors can render an important service lies in the evaluation of problem drivers.

Our Legislature is to meet this coming January, and it is my hope that our County Auxiliaries will acquaint themselves with the bills to be proposed by the State Department of Public Safety. Perhaps we should concentrate on supporting just two or three bills. I recommend particularly the Driver Education Bill and the Implied Consent Bill. Another definite need is for a better relicensing procedure, especially as regards vision-testing. If any of you would like copies of the above bills, you can secure them from the Safety Education Division, Iowa Department of Public Safety, State Office Building, Des Moines 19.

Our National Auxiliary's safety slogan "SWAT" stands for Safe Water Activity Training. Your county president and your safety committee chairman have received the national flyer on this program. The objective of our National Auxiliary is to have *every doctor's children learn to swim.* We, at the state level in Iowa, heartily concur.

The national flyer also recommends the following projects:

1. Poison control.
2. Institution of home-safety instruction for elderly people.
3. Encouragement of all methods of traffic safety.
4. Home and farm safety programs.

If any of you would like information on any of these projects, please contact your safety chairman. I hope I'll be swamped with requests.

—FRANCES HINES (MRS. RALPH E.)
Safety Chairman
3525 Witmer Parkway
Des Moines 10

STEPS TO EFFECTIVE CITIZENSHIP

1. Take an active, willing and interested part in the affairs of the community. This means real participation in PTA groups, young people's activities, fund drives, church work, chambers of commerce, and so on.

2. Plan your contributions of time in such community activities in the same manner that you plan your budget or your tithe. Don't try to do a little something for everyone. Concentrate on making a real contribution to your church or your school system, or to some other organization or cause, but don't scatter your shots.

3. Take an active part in local political activity for the party of your choice. Let the party organization know that you are willing to work. This may include block work, baby sitting or phoning at election time—hard, thankless work. It may take the form of help with political rallies, dinners and meetings of all kinds. These affairs are essential to party morale. Help with fund raising is obviously important. No party can possibly function without active participation on the part of many. If you are active and hardworking, you will have a say in the end result. If you aren't and don't like the results, NOT A SOUL WILL NOTE YOUR TEARS!

4. Take a stand if you believe in a cause or in a candidate. Many of the friends you make in your community activities will be grateful for your guidance.

5. Write to your congressmen, and get your friends to do the same. When your congressman takes a position you have suggested, write and thank him. He's human too!

6. Remember that your husband's most devoted and grateful friends are his satisfied patients. When occasion offers, urge them to help out on the political issues of the day. They will welcome a chance to do something. It is said that the doctors of America see 2,000,000 patients a day.

7. Get into politics *and have some fun!* You'll find nothing else quite so exhilarating.

8. Be proud of your part in politics, as perhaps your highest form of social endeavor.

(Prepared for distribution at the 1960 Convention of the Woman's Auxiliary to the AMA, Miami Beach)

ACCIDENT TOLL IN 1959

A recent issue of STATISTICAL BULLETIN,* a publication of the Metropolitan Life Insurance Company, says that accidents took an estimated 91,500 lives in continental United States during 1959, a slightly higher toll than in 1958. However, because of population growth, the accident death rate declined fractionally to an all-time low of 52 per 100,000 population. Last year was the fourth in a row to show a reduction in the death rate from accidents.

Motor vehicle accidents continued to be the major cause of fatal injuries, accounting for two-fifths of the total accident toll. The highway deaths for 1959 totaled about 37,500, or about 500 more than in the preceding year. Yet the record appears somewhat less deplorable when one considers the increase in traffic that took place. According to the data now available, the motor vehicle accident death rate per 100 million miles travelled in 1959 was slightly less than the all-time minimum of 5.6 established in 1958.

Public accidents other than those involving motor vehicles accounted for nearly 17,000 deaths in 1959, somewhat above the total for the previous year. Injuries about the home took 27,000 lives, or the same as in 1958. Accidents arising out of and in the course of employment killed approximately 13,000 persons during 1959. About 2,600 of these were fatally injured in motor vehicle crashes (which number is also included in the total for motor vehicle mishaps).

DISTRICT III

Auxiliary members in District III, which includes Clay, Dickinson, O'Brien, Osceola, Lyon, Sioux, Emmet, Palo Alto and Pocahontas Counties, met at Brooks Country Club, Lake Okoboji, for a buffet luncheon on Monday, August 22.

Mrs. L. R. Hegg, Rock Valley, the Third District councilor, assisted by Mrs. D. H. King, of Spencer, planned the program and made all the arrangements for the meeting. A full report of the meeting will appear in the October WOMAN'S AUXILIARY NEWS.

FUTURE NURSES CLUB

If the Future Nurses Club your Auxiliary is sponsoring in your local high school has not applied for a national charter, it will want to do so this year. This charter is a symbol that your club is participating in building a new national youth program to help the future nursing needs of the country. It also assures it of recognition among the "future clubs" of other careers and fields in the school. To obtain a charter the club must meet minimum requirements which have been set up. Information on chartering your already organized FNC, or if your school has none, material and information regarding "How to Start a Future Nurses Club" may be obtained from the Auxiliary's Health Careers Chairman, Mrs. W. C. Shinkle, 307-49th Street, Des Moines 12, or directly from the Auxiliary headquarters, 529-36th Street, Des Moines 12.

The Annual Future Nurses Club Convention will be held in Fort Dodge, November 4, 1960. If your plans for starting a FNC are being formulated, be sure to organize early enough for the officers of the new club to attend this meeting. This early announcement will also give any FNC your Auxiliary is sponsoring an opportunity to get its transportation plans and financing completed, as well as for the sponsor to arrange to accompany the FNC representatives to this centrally located convention of high school students interesting in nursing careers.

THE OYSTER AND THE EAGLE

When God made the oyster, He guaranteed him absolute economic and social security. He built the oyster a home, a shell, to protect him from his enemies. When hungry, the oyster simply opens up his shell and the food rushes in. But he is limited to a few feet of ocean bed.

When God made the eagle, He said, "The blue sky is the limit. Go build your own house," and the eagle went out and built his house on the highest mountain crag, where storms threaten him every day. For food, he flies through miles of rain and snow and wind.

The eagle, and not the oyster, is the emblem of America.

—Anonymous

* January, 1960, p. 7.

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
President-Elect—Mrs. B. F. Kilgore, 5434 Woodland, Des Moines 12
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. W. W. Sands, 1515-41st Street Place, Des Moines 11

The Lengthening Shadow of the Capitol

AUSTIN SMITH, M.D.

WASHINGTON, D. C.

If your office were located, as mine is, virtually within the shadow of the United States Capitol building, you might anticipate that the shadow would help to cool you in the hot summer days of Washington. But somehow, this is not the case, and perhaps there are researchers who would be curious about this strange antithesis of physical law. The fact seems to be that the shadow of the Capitol has served in recent months to magnify, rather than to shield the effects of the heat on those of us interested in health care.

If the foregoing seems cryptic, permit me to explain. A short time ago the 86th Congress concluded its formal sessions. The attention it gave to medicine, pharmacy and the prescription drug industry in recent months has seldom, if ever, been exceeded in any similar period.

INVESTIGATIONS THAT AREN'T INVESTIGATIONS

I wish I could say that all of the activities of the Congress had halted at the end of the formal session, but regretfully this is not the case. Unfortunately for a number of reasons, members of Congress and other elected officials from some of our states need not campaign for victory in the general elections. For them it is necessary only to survive the competition, if any, in the primary election. Then they are free of the activity which at this season begins to encumber the vast majority of our legislators.

Such is the circumstance of the man who undertook nine months ago to "investigate" the prescription drug industry. I use this word *investigate* in the Senator's semantic, not in my own or yours. For our training has led us to believe that an investigation is a seeking of facts from which to draw a conclusion. However, in at least *this* Senator's concept an investigation is an effort to *display* certain information in order to convince others of a conclusion drawn before the investigation begins. The proof of my contention lies in the record already drawn in this so-called investigation, and which I invite you to examine at length elsewhere.

In any event, as you know, this spurious probe has been renewed on Capitol Hill, with no sign that the pattern will differ materially from that indicated in the previous 7.000 transcript pages of proceedings. I can, if you like, save you considerable reading time by telling you now what the outcome of the next week of hearings will be, from the point of view of those in charge of it:

Antibiotics, the product-type currently being scrutinized, are really not so wonderful—they haven't cured *everything;* they cost too much because the companies which make them have an annoying and archaic custom of paying dividends to their stockholders; discovery of most of them occurred abroad or was financed by the federal government; at any rate, you can purchase them for much less elsewhere; advertising them is expensive and succeeds only in brainwashing physicians; and you can save your patients a great deal of money if you prescribe them according to their generic names.

In reverse, I can give you this capsule report of what will be ignored: The incalculable conservation of lives and productivity which these products have helped make possible; the immeasurable incentive in the competitive, free-enterprise system which produces them and makes them readily available; the splendid research which, though costly in failure, has determined the identity of useful antibiotics and—what is equally as important—the methods to synthesize and mass-produce them; that while the price scales abroad are indeed somewhat lower, the wage scales are much further below those in this country; the constant informing of physicians through educational and promotional activities of the indications, counter-indications and usages of these products; and the fact that brand names guarantee the highest standards of production, content and effectiveness, for a difference in price of not more than pennies.

But I do not wish to dwell on this subject lest you think we in the drug industry have been alone in this odd, warm shadow of the Capitol dome. Pharmacy had its day in the sun when it rose to support a bill to outlaw mail order prescription filling in the District of Columbia, which is a focal point of such operations. Before the measure had progressed out of committee, however, the provision was stricken and the pharmacists had to retreat to opposition to the bill because of other, negative provisions in it.

FREE ENTERPRISE HAS WON AN INDECISIVE BUT HEARTENING VICTORY

On the brighter side, of course, was the encouraging outcome of the classic legislative battle over federal assistance for medical care for the

Dr. Smith, formerly editor of J.A.M.A. and now president of the Pharmaceutical Manufacturers Association, gave this address before the Michigan & Wayne County Academies of General Practice, in Detroit on September 7, 1960.

aged. You are familiar with the fact that certain legislators, undaunted by a contrary vote of the House of Representatives, and the Senate Finance Committee, fought unsuccessfully to reinstate a plan of involuntary confiscation of wages to support an enforced program of medical assistance.

I should pause here to pay tribute to organized medicine at work in a citizens' cause. This was a clear example of how a group of people not ordinarily active or clamorous in political activity can, on the side of right, join with others in an effective expression of their views. This was a clean fight—with facts, not threats or abuse. Yet this was not the winning of any war for the American people; a skirmish, yes; a battle, possibly; but a war, no. For this was only an episode in the struggle of the Marxes, the Engels, the Fabians and their descendants, begun before any of us was born. They began this war for classless mediocrity, for state control of religion, the means of health, the means of production and communication. Many skirmishes have been won by the defenders in the intervening decades, yet the progress of the battle for individual freedom and initiative has not been wholly satisfactory. Nowadays we need only to look a few miles off the coast of Florida to grasp this point.

IT'S UNFAIR TO TERM PRIVATELY-FINANCED RESEARCH "INADEQUATE"

Medicine and its supporting fields have always been a major front in this struggle. A favorite argument of those who would supplant private institutions with state activity and control is, of course, that the efforts of the former are "inadequate." The entire field of health research is a striking example of attempts to apply this argument.

You gentlemen and your professional forerunners from the beginning of civilization have endeavored to understand better, and expand your knowledge of, the human body and mind. Similarly, though far more recently, the industry which I represent has tried to provide more specific therapeutic tools. Our objective is the same: To improve health.

As we look back we find that without exception the major military episodes in which our nation has been involved have spurred us to new efforts and lasting achievements. The first mass production of medicine, for Washington's army, began in 1778 at Carlisle, Pennsylvania. From the War Between the States and the years following, the names of Squibb, Searle, Lilly, Abbott, Tilden, Upjohn, Merrell, Wyeth and others became familiar. In World War I when imports were cut off from the leading nation of pharmaceuticals, Germany, the modern era of discovery, synthesis and mass production gained momentum.

The second World War, of course, saw the development of antibiotics. Parenthetically, I was much interested in a recent news magazine article recalling that in 1937 a group of scientists attempted together to peer 25 years into the future and predict technological advances by 1962. Curiously, although there were signs to the contrary, the group failed completely to foresee antibotics. It was, we are told, Dr. Waksman of Rutgers who finally coined the word when he developed streptomycin—while doing research under a drug company grant, I might add.

The U. S. pharmaceutical industry, in the development of penicillin and subsequent products, made perhaps its greatest contribution to medicine and health the world over. This illustrates too the willingness of this industry to gamble substantial funds in projects of uncertain outcome when there may be a great gain to humanity. In this case, companies plunged nearly $23 million into construction of fermentation plants to meet wartime demands, despite the possibility that the discovery of a process of synthesis would ruin the investment. It marked the beginning of a plentiful supply and downward price spiral of this medicine.

It is, of course, not necessary to recite to this distinguished audience in detail the achievements which have grown from the privately financed research and development activity of the U. S. pharmaceutical industry. When I appeared in the industry's behalf before the Senate committee last spring, I furnished long lists of these achievements for the record. It is my hope, though probably a futile one, that the investigating committee will refer to this documentation in its final report.

PRIVATE INITIATIVE IN DRUG RESEARCH CAN BE SMOTHERED

Today we are crossing the $200 million per year mark in the rate of drug industry expenditures for health research and development. We fully expect this rate to double in the next ten years. Yet —and here we move back again into that not-so-benign shadow of the Capitol—we are witnessing the intrusion of the federal government in this area on a scale which is incomprehensibly massive.

Let me give you some figures in this connection. For the current fiscal year which began this past July, the National Institutes of Health, through the President, asked Congress for $400 million. It considered this amount ample in view of available manpower. At this point, however, events took a turn seldom before observed in the appropriations process. The House, acting first, persuaded itself that an additional $55 million was required. The Senate Appropriations Committee, with an apparent desire for objective assistance, named a committee of professional people to make recommendations. This committee sought the advice of others, including representatives of the pharma-

ceutical industry, and then proceeded to ignore the advice offered.

Thus the so-called Jones Committee Report recommended $664 million, which the Senate promptly rubber-stamped. In conference between the House and Senate the final agreed appropriation was $560 million, or $160 million more than NIH wanted.

Why, you may ask, do we assign this Congressional activity to the realm of the lengthening shadow? Here is one answer:

"The importance of strong and continued private support of science can scarcely be overemphasized. . . . Private sources of funds in industry, education and philanthropy should exercise leadership in undertaking the large and imaginative scientific risks so necessary for keeping American science in the forefront of the advancement of human knowledge. . . . As the Federal Government has increased its support of science in the last dozen years, there has been a hesitancy on the part of corporations and private foundations to maintain the level of their contributions. . . . It would be most unfortunate if this hesitancy were to continue or spread. . . ."

Now, those are not our words; they are from the President's Science Advisory Committee. The President himself, in a message to a symposium on basic research in New York City last year, warned:

"We must recognize the possibility that the federal government, with its vast resources and its increasing dependence on science, could largely preempt the field or blunt private initiative and individual opportunity. This we must never permit. Too much dependence upon the federal government may be easy, but too long practiced it can become a dangerous habit."

WHAT ABOUT THE FUTURE?

So we have examined briefly some matters of interest—mutual interest—that have generated the political heat in the health field in a comparatively short few months in Washington. Pharmacy lost a skirmish. Industry lost one. The medical profession won one. Obviously the siege has not been lifted.

The future depends, essentially, on two things: First, the orientation of those who will be elected this fall to the executive and legislative branches of our national government; and second, the degree of responsibility as citizens that will be shouldered by the individuals and organizations who comprise the health team. The first, obviously, depends in part on the second. The visible signs are encouraging. Pharmacy, with 110,000 members and through the elevation of its professional status and increasing public services, is increasingly more effective. The industry, with its 180,000 employees and 2,430,000 owners, is an awakening and potentially great force. The medical profession already leads in its citizenship sophistication. Others will follow these examples.

I think that by now we have learned to anticipate assault rather than to be taken by surprise and forced to retreat each time. This means we can take the offensive. Our goal is the victory of a way of life. Our tactics involve better communications among ourselves, mutual assistance, and the presentation of facts to the public which will permit opinion to take care of itself. This is our job. Let's stay on it.

Coming Meetings

In State

Oct. 5	**Mercy Hospital Medical Day.** Mercy Hospital, Des Moines
Oct. 8	**Radiology.** S.U.I. College of Medicine, Iowa City
Oct. 20	**Northeast Iowa Clinical Conference.** Masonic Temple, Waterloo

Out of State

Oct. 2-5	**Indiana State Medical Association.** Sheraton Hotel, French Lick
Oct. 2-7	**American Society of Anesthesiologists, Inc.** Statler-Hilton Hotel, New York City
Oct. 2-7	**American Society of Plastic and Reconstructive Surgery.** Statler Hotel, Los Angeles
Oct. 2-7	**Pennsylvania Medical Society.** Chalfonte-Haddon Hall, Atlantic City
Oct. 3-4	**San Diego County Heart Association Tenth Annual Symposium on Heart Disease.** El Cortez Hotel, San Diego
Oct. 3-5	**Obstetrics for General Physicians.** Center for Continuation Study, University of Minnesota
Oct. 3-5	**Annual Fall Clinical Conference.** Hotel Muehlebach, Kansas City
Oct. 3-5	**Association of Medical Illustrators.** La Salle Hotel, Chicago
Oct. 3-14	**General Pediatrics.** Cook County Graduate School of Medicine, Chicago
Oct. 3-14	**Obstetrics, General and Surgical,** Cook County Graduate School of Medicine, Chicago
Oct. 3-14	**Electrocardiography and Heart Disease.** Cook County Graduate School of Medicine, Chicago
Oct. 5-6	**Los Angeles County Heart Association 30th Annual Professional Symposium on Cardiovascular Diseases.** Beverly Hilton Hotel, Beverly Hills, Los Angeles
Oct. 5-7	**San Francisco Heart Association 30th Annual Postgraduate Symposium on Heart Disease.** St. Francis Hotel, San Francisco
Oct. 5-7	**American Association for Surgery of Trauma.** Coronado Hotel, San Diego

Oct. 5-8	**American Academy for Cerebral Palsy.** Penn-Sheraton Hotel, Pittsburgh
Oct. 6	**Sixth Annual Symposium on School Health.** University of Kansas School of Medicine, Kansas City
Oct. 6-8	**American Association of Medical Clinics.** New Orleans
Oct. 6-8	**Central Association of Obstetricians and Gynecologists.** Kansas City, Missouri
Oct. 6-9	**New Hampshire-Vermont State Medical Societies.** Bretton Woods, New Hampshire
Oct. 7	**Physical Medicine.** University of Nebraska College of Medicine, Omaha
Oct. 7-9	**Western Industrial Medical Association Combined Meeting With Fourth Western Industrial Health Conference.** Jack Tar Hotel, San Francisco
Oct. 8	**American Rhinologic Society.** Belmont Hotel, Chicago
Oct. 8	**Metabolic Errors, Genetics and Mental Disease, Second Invitational Conference.** Napa State Hospital, Napa, Calif.
Oct. 8-9	**Surgery (University of California, San Francisco).** Franklin Hospital, San Francisco
Oct. 9	**American Otorhinologic Society for Plastic Surgery, Inc.** Conrad Hilton Hotel, Chicago
Oct. 9	**National Medical Foundation for Eye Care.** Palmer House, Chicago
Oct. 9-12	**Virginia Medical Society.** Cavalier Hotel, Virginia Beach
Oct. 9-14	**American Academy of Ophthalmology and Otolaryngology.** Palmer House, Chicago
Oct. 10-11	**Annual Program Conference of Blue Shield Plans.** Drake Hotel, Chicago
Oct. 10-12	**Congress on Industrial Health (American Medical Association's Council on Occupational Health).** Hotel Charlotte, Charlotte, North Carolina
Oct. 10-13	**American Association of Medical Record Librarians.** Olympia Hotel, Seattle
Oct. 10-13	**Asia-Pacific Academy of Ophthalmology.** Manila, Philippines
Oct. 10-14	**American College of Surgeons Forty-Sixth Annual Clinical Congress.** Civic Auditorium, San Francisco
Oct. 10-14	**Cancer and the Internist (American College of Physicians).** Memorial Center, Sloan-Kettering Institute for Cancer Research, New York City
Oct. 10-14	**Hematology.** Cook County Graduate School of Medicine, Chicago
Oct. 13-15	**Academy of Psychosomatic Medicine.** Benjamin Franklin Hotel, Philadelphia
Oct. 13-15	**American Cancer Society California Division Annual Meeting.** Villa Hotel, San Mateo
Oct. 13-15	**Mississippi Valley Conference on Tuberculosis.** Milwaukee
Oct. 14-15	**Central Neuropsychiatric Association.** French Lick, Indiana
Oct. 14-15	**Dermatology.** University of California, San Francisco
Oct. 14-15	**Fourth Annual Symposium on Human Genetics (Kaiser Foundation Hospitals in Northern California).** Fairmont Hotel, San Francisco
Oct. 14-16	**Fourth Annual National Convention, American Association of Medical Assistants.** Dallas, Texas
Oct. 16-19	**California Academy of General Practice Twelfth Annual Scientific Assembly.** Masonic Memorial Temple, San Francisco
Oct. 17-19	**Gallbladder Surgery.** Cook County Graduate School of Medicine, Chicago
Oct. 17-20	**American Academy of Pediatrics.** Palmer House, Chicago
Oct. 17-21	**National Safety Congress.** Chicago
Oct. 17-28	**Diagnostic Radiology.** Cook County Graduate School of Medicine, Chicago
Oct. 17-28	**Internal Medicine.** Cook County Graduate School of Medicine, Chicago
Oct. 17-29	**Course in Laryngology and Bronchoesophagology.** University of Illinois College of Medicine, Chicago
Oct. 18	**American Association of Poison Control Centers.** Palmer House, Chicago
Oct. 19-21	**Association of Life Insurance Medical Directors of America.** Statler-Hilton Hotel, New York City
Oct. 20-22	**Dermatology for General Physicians.** Center for Continuation Study, University of Minnesota
Oct. 20-22	**Southwestern Medical Association.** Hilton Hotel, El Paso
Oct. 20-22	**Surgery of Hernia.** Cook County Graduate School of Medicine, Chicago
Oct. 21-22	**Clinical Conference on Cancer of the Female Genital System.** University of Texas M.D. Anderson Hospital and Tumor Institute, Houston
Oct. 21-22	**Symposium on Research Approaches to Psychiatric Problems.** Galesburg State Research Hospital, Galesburg, Illinois
Oct. 21-23	**American Heart Association, Inc.** Kiel Auditorium, St. Louis
Oct. 21-23	**Midwest Forum on Allergy.** Penn-Sheraton Hotel, Pittsburgh
Oct. 22-27	**Western Orthopedic Association.** Hotel Del Coronado, Coronado
Oct. 23	**Stroke and the General Practitioner.** University of Nebraska College of Medicine, Omaha
Oct. 23-26	**American College of Gastroenterology.** Bellevue-Stratford Hotel, Philadelphia
Oct. 24-26	**Twenty-Fifth Annual Convention of the American College of Gastroenterology.** Bellevue-Stratford Hotel, Philadelphia
Oct. 24-28	**Clinical Cardiopulmonary Physiology (American College of Chest Physicians).** Sheraton Towers Hotel, Chicago
Oct. 24-28	**Frontiers in Medicine and Surgery.** The New York Academy of Medicine, New York City
Oct. 24-Nov. 4	**Fractures and Tranmatic Surgery.** Cook County Graduate School of Medicine, Chicago
Oct. 26-27	**Industrial Hygiene Foundation of America, Inc.** Mellon Institute, Pittsburgh
Oct. 26-28	**Animal Care Panel.** St. Louis
Oct. 26-28	**Association of State and Territorial Health Officers.** Jack Tar Hotel, San Francisco
Oct. 26-28	**Conference on Antimicrobial Agency (Society for Industrial Biology).** Washington, D.C.
Oct. 27-29	**Annual Course in Postgraduate Gastroenterology. (The American College of Gastroenterology).** Bellevue-Stratford Hotel, Philadelphia
Oct. 28-29	**Yale School of Medicine Sesquicentennial.** Yale University, New Haven
Oct. 30-Nov. 2	**Sixty-Seventh Annual Convention of the Association of Military Surgeons.** Mayflower Hotel, Washington, D. C.
Oct. 30-Nov. 3	**Southern Medical Association.** St. Louis
Oct. 30-Nov. 4	**American Fracture Association.** El Presidentia Hotel, Mexico D.F.
Oct. 30-Nov. 4	**American School Health Association.** San Francisco

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Sports for Children

R. A. McGUIGAN, M.D.

WINNETKA, ILLINOIS

In recent years, the subject of athletics for children has become a highly controversial topic. Controversy first developed following the statements made by General Hershey concerning what was thought to be an excessive rejection rate of draftees during World War II. It was intensified later by statements of Kraus and Weber indicating that our children were, to a frightening degree, unfit physically. In both these cases, the statements were at variance with the facts as known to the medical profession. Unfortunately, the medical profession has not become articulate on the subject until recently, and in the meantime the physical training specialists and the lay public have become adjusted to the idea of a great need for activity on the part of children. The physical education people who take an interest in the topic act on the theory that what is needed is greater opportunities for competitive team play, and in line with their own youthful experience, they lean to football and baseball.

It is quite possible that the present-day emphasis on better and better athletic performance is only another aspect of the current emphasis on greater speed in our daily life generally. Our children today are exposed to a far greater pressure academically than we ourselves were. Society generally lives at a faster pace than in past years. But whereas there may be a supposed need for this increased speed and pressure in everyday life, athletics or sports should provide opportunities for relaxation, rather than produce an increase in tensions.

It is a sad commentary that the modern trend toward the varsity concept of athletics for children of junior high school age, or younger, does far more harm than good. It produces probably a hundred spectators for every participant. And beyond this, it produces athletes in many sports who devote the formative years of their lives to a sport that they can never pursue in their adult lives. This, I think, is the crux of the matter. For there is no reason for concern about the physical welfare of our children; rather, there is considerable need for thought about our adults.

Dr. McGuigan is a member of the School Health Committee of the American Academy of Pediatrics, an associate in pediatrics at the Northwestern University Medical School and medical advisor in the public schools of Evanston, Illinois.

SPORTS ARE THE MODERN TECHNIC FOR DEVELOPING MUSCULATURE

No one will deny that sports are an admirable thing for children. No one argues that they should not be emphasized and encouraged—that we should not stress their importance. They are not only desirable or advisable, but without question necessary. Many essential functions are filled by a proper program of sports. No better way is available for the developing of musculature—for the building of muscle coordination or muscular skills. At one time, part of this function was provided by calisthenics. All of us remember the days when we lined up and went through a program of exercises. Few—if any—of us enjoyed that technic, and even fewer of us use that method today as a means of keeping fit. And no matter how dedicated the instructor or how conscientious the student, calisthenics do nothing to provide the coordination and muscle skills needed for games of any kind. No individual really enjoys a sport in which he performs badly. If we are to develop a healthy love of activity in the adult, we must perforce begin to develop that enjoyment in the child. And that means that the child has to learn the coordination and muscle skills necessary, beginning at an early age, by playing games, not by doing setting-up exercises.

This does not mean that the child needs the more intensively competitive forms of games, however. Of course, we cannot rule out competition. After all, we have to compete against nature just to stay alive. Children playing jacks or marbles are competing. Competition is already an omnipresent part of life. It cannot be eliminated, but it needs not be stressed.

Above all, the statement that children need more opportunities to compete is nonsense! They already do and they always will compete, and increasing the amount of competitive stress may destroy a child's incentive to play. The mere fact that some children thrive on such competition does not compensate for the harm it does to others of them. Our program should be directed to the whole population, not to just a part.

It is agreed that we want children to play games. The ideal would be for every individual to have available some form of athletics that he can participate in and enjoy. The more we avoid stressing the more strenuous and competitive games, the more likely we are to find more children taking part in athletics and continuing to do so in their adult lives.

BODY-CONTACT SPORTS HAVE SERIOUS DRAWBACKS

Naturally enough, in any physical activity there are going to be increasing numbers of injuries. Although this is not to be lightly dismissed as natural and unavoidable, neither is it a reason for curtailing sports activity. But certainly it is a problem that needs to be faced, and is in fact the subject of intense interest at the present time. There are those who feel that injuries are natural in childhood, and do not see any reason for keeping youngsters out of hazardous games because of the dangers involved. It is quite true that children do in fact get hurt, and it is likewise a fact that accidents constitute the major single cause of death for such individuals. But it is one thing to have a child injured in an accident, and quite another to have him injured in a game that adults are promoting and encouraging because of its character-building potential and of the training it gives participants in accepting hard knocks.

The subject of athletic injuries is receiving a great deal of attention. The American College of Sports Medicine has come into being in recent years, and its title suggests its purpose. The AMA Committee on the Medical Aspects of Sports has also been formed because of a need for the functions it has undertaken. There have been no fewer than eight medical meetings in the past 12 months devoted to athletic injuries. Even the weekly medical paper SCOPE devotes a page each week to sports medicine.

Now, all of this activity indicates only one thing. It means that athletic injuries are of such frequency and severity as to need serious attention. Concern is being directed toward prevention and treatment of those injuries. Progress is being made steadily in both of these aspects of athletic medicine. Although we can only deplore the increasing degrees of disability that sports mishaps are producing, some good will come of them, just as in wartime great scientific advances are made in the presence of deplorable human losses. The athletic field is becoming a laboratory for the intensified study of the physiology of stress, and thus we are acquiring more accurate knowledge and are developing better protective equipment, better training methods and better technics for preventing stress and the other hazards to human physiology and body mechanics.

All of this study is bringing more and more clearly into focus the physiological basis for questioning the advisability of some types of athletic activity for children below high school age. The greater susceptibility of the pre-adolescent to serious traumatic injury is unquestioned. It is foolhardy to subject a growing child deliberately to activities of the strenuous, body-contact kind, knowing that the epiphyses are not yet solid, the joints poorly protected by stabilizing and protective muscle, ligament and tendon, the coordination insufficiently developed, and the skills imperfectly established. A pertinent point here is the discovery of the Little League researchers that children do not have as quick a reaction time as had been assumed. The pitcher has had to be moved farther from the plate because batters were too frequently hit by balls they were not quick enough to dodge.

HERE ARE SOME STATISTICS

Whenever the topic of sports such as football is brought up, the objector immediately runs into a demand for figures to support the statement that the game is too dangerous for children. This demand reflects a narrow point of view, but it nevertheless is hard to answer since the opposition is always drawn from the lay public and is convinced in advance of the great benefits to be derived from this particular sport. Statistics regarding athletic injuries in pre-high school children are not yet available. However, one figure concerning high school athletics is available from Wisconsin, where a statewide high school athletic insurance program is in force. In the 1958-1959 school year, 6,200 injuries were reported in that state. This figure represented a sharp increase over the previous year, and incomplete reports show that the rate increased even further in 1959-1960. Significantly, football accounted for 3,984 of these 6,200 injuries, and apparently caused the more severe disabilities, since the football injuries cost over 4½ times as much as those from any other sport. In fact, they accounted for two-thirds of all the insurance costs incurred altogether.

Fatalities from football are usually minimized, for they are reported on the basis of deaths per year per 100,000 players—an extremely low figure. The fact remains, however, that during the years 1931 through 1959 there were 491 fatalities directly due to the game. Of these, 378 were in boys of high school age or below, and 87 were in boys under 16 years of age. The injury rate is of course vastly higher, in a ratio of thousands of non-fatal injuries to one death. The fatality figures are not what concern us. Rather, we are troubled about the vastly greater numbers of injuries, some of which may be permanently crippling or deforming. To have a boy permanently disabled at an early age as a result of participation in a game is a disaster!

This being so, what about body-contact sports? There has always been a love for such games in certain types of individuals, both in civilized and in uncivilized cultures. It isn't sensible to argue that such activities are necessary as a means of developing an individual's ability to take punishment. But there have always been rough games, and there are some individuals whose temperaments require such rough physical contact. These games cannot be eliminated, and should not be. But neither should they be promoted or encouraged. They should be reserved for the small number who need them.

THE VARSITY-TEAM SYSTEM IS AN ALMOST UNMIXED EVIL

I have commented on the competitive side of athletics. This is commonly stressed as the most beneficial aspect of team sports, for it is supposed that an intensive competitive situation helps to ready the child for the competitive stress of life. But this thesis is highly debatable. I haven't yet encountered a psychiatrist who subscribed to it, and certainly when the physician sees the emotional disturbances resulting from too intensely competitive games, played before adults, he wonders how much good is being done, and for whom. There is not only the danger of emotional trauma, but the likelihood of destroying the children's enjoyment of playing the game. The child who loses out in early life is lost to the athletic fraternity in adult life. He will thereafter be a spectator rather than a performer.

The principal obstacle to the attainment of physical fitness in our adult population is the varsity-team system. It is concentration on the star and disregard of the average player that results in an increasingly sedentary population. And stressing games from childhood through college that are of no use in adult life does nothing to help this situation. Too frequently we find pressure exerted by the colleges on the high schools to produce more material for the college varsity teams, and this pressure filters down even to the junior high schools. Now, we see the development of midget football leagues for players eight years old and up. The needs for these early beginnings are obscure; the possible benefits are equally vague And why we should have so much emphasis on a sport that is the most hazardous of all and the least valuable of all, in terms of usefulness in later years, is difficult to understand.

THE VARSITY SCHEME IS BEING CARRIED TO RIDICULOUS LENGTHS

It should be remembered that none of these widespread league-type programs are either fostered or carried on by professional physical education people. Rather, they are all administered by lay people whose intentions are good but whose understanding of children and of their physical and emotional needs is below the professional level. No programs comparable to Little League or Pop Warner Football are, to my knowledge, being carried on by professional recreation departments.

The greatest defects of such programs are, first, that their scope is limited, and second, that they reflect the adult's concept of what children need and want. An immense amount of time and effort is devoted to teaching children a single sport, the desirability of which is debatable and the future application of which is questionable. The idea of uniformed teams competing in a league on a schedule basis, with sectional, regional, state and even national playoffs, certainly is not the idea a child has in mind when he sets up a game. The assembling of adult audiences for children's games greatly intensifies the stress that is inherent in the game itself, and is decidedly undesirable for youngsters of these age groups. Yet it is a uniform accessory to the organized type of team play that is becoming prevalent today. Another serious drawback to this type of athletics for children is the fact that it does not reach the average youngster, but concentrates upon those whose ability is above average. Much time and money is spent on providing opportunities for those who need it least, and the majority who are most in need of encouragement and instruction are ignored. It is the varsity concept applied at an early age, to the detriment of the many and to the quite likely disadvantage of the few.

YOUNGSTERS SHOULD BE ENABLED TO HAVE FUN—NOW AND LATER

Proper organization of an athletic program for children is easily outlined, and in theory easily attained. It involves, first of all, attracting and holding as many children as possible. The objective is to teach these children to play and enjoy many games involving different skills—especially games and sports that they can continue to take part in throughout life. This means an avoidance of concentration on one or more games, and especially not on body-contact sports. It means no emphasis

on just one child, and no developing of a star at an early age. Competition should not progress beyond the intramural stage in junior high school, and a special effort should be made to avoid developing a "varsity" team. Except for other children, no audiences should be present at the games.

The years prior to 10-12 should be devoted to games which will develop basic skills. There are some individuals who are natural athletes. These are highly coordinated individuals who can learn specialized game skills quickly, but even they must learn the specialized game technics, though they learn them quickly as a result of their superior coordination. With the average child, much time should be spent in developing basic skills in the early years, and the application of these skills to specific games should be left for later. There should be no body-contact sports in the years prior to high school. Teaching boys between eight and 10 years of age to play football encourages them to play it at ages between 12 and 15, when their musculoskeletal systems are least able to withstand the stresses that are involved.

A primary consideration should be to develop the habit of good sportsmanship early. The fact that each contest is no more than a game should never be forgotten. It is vastly more important for youngsters to develop a love for the game than an intense desire to win. The saying attributed to Leo Durocher "Nice guys finish last" does not apply to children, all of whom should be—and normally are—"nice guys." A coach who emphasizes winning has no place in a pre-high school program. The desire to win can be developed later when the whole organism is physically and emotionally more mature. The young child should be allowed to learn how to play first, and to enjoy playing for its own sake.

SUMMARY

Our object in promoting sports for children is clear. We are interested primarily, indeed entirely, in the welfare of the individual, both as a child and as an adult. Promoting games for children partially or wholly as a means of providing material for varsity and professional teams of the future has no place in this area, and is completely unacceptable as a reason for organizing more competitive athletics for youngsters. There are a great many sports that are highly enjoyable, physically beneficial and available both in early life and during the adult years.

The child who is encouraged to concentrate upon and star in such games as football, baseball and hockey will have nothing to take their place later on. Although he may be a fine physical specimen when he reaches college, he is not so likely to be active in later years as is the boy who swam, played tennis, ran or played handball, nor will he at any time be in appreciably better physical condition.

Children need physical activitiy and respond to proper teaching. I haven't suggested that athletic activity should be limited in any way. Instead, I have said that there should be continuous effort directed toward developing greater and more widespread activity. The idea should be to have as many children as possible playing as many different games as possible, and the emphasis should be in the direction of a program that will produce as many adult participants and as few adult spectators as possible in future years. And although Webster would find little difference between these two terms, I think my connotation is clear when I say that what is needed is not competitive athletics, but recreational sports!

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Supervision of Football in the Boston High Schools

JOSEPH H. BURNETT, M.D., F.A.C.S.

BOSTON, MASSACHUSETTS

The Boston High School Athletic Program is closely supervised by the Department of Physical Education in every conceivable way. This supervision includes assuring adequate equipment, properly arranged schedules, regard for weather conditions, proper officials for all games and medical supervision for all players. Two items stand out in my mind as vital factors in the success of this program, namely the coaching and the medical supervision. Coaches are primarily teachers, for after securing teaching positions they then apply through their headmasters for coaching jobs. The beauty of this plan is that a coach's job doesn't depend upon his scores. As long as he does his work and handles the boys satisfactorily, he doesn't have to worry about the number of games won or lost. No one likes to lose, and least of all a football coach. These men try just as hard under this plan as they would if their jobs depended on their won-and-loss records. Between halves, I have diagnosed one coach as having an acute coronary attack and sent him to the hospital. Another coach had so many digestive upsets during games that I advised him to give up coaching, and he did. Many coaches in our system retire because of the age limit, and many quit after 30 or more years of coaching.

Medically, the welfare of the boys is up to the doctor in charge at the game, complete authority for them having been delegated to him by the director of physical education. An injured boy returns to the game only with the consent and approval of the doctor. An alert physician can remove a boy at any time, if he thinks it advisable to do so, and in that way tired and exhausted players are removed before they get hurt. A few minutes of rest can make a lot of difference for high school players. Boys detected limping are promptly removed and their conditions investigated. We go on the basis that "a good sub is much better than an injured star."

At the start, all boys are screened by the school physicians, and in this way the boys who do not belong are kept out. The first three or four weeks, by all odds, are the most difficult part of the season. Most of our serious injuries occur during that period. There are two reasons—lack of conditioning and the fact that many of the boys are playing for the first time under supervision. It is obvious, then, that the prevention of injuries requires conditioning and know-how. The more these two items are developed, the less is the likelihood of injury. Many youngsters are decidedly out of condition at the start of the season, with too much waistline and marked dyspnea on exertion. Many, too, know little or nothing about football fundamentals such as blocking, tackling, falling on the ball, etc. They are awkward, ungainly and unfit for strenuous exercise, especially for a game as demanding as football. More and more emphasis should be placed on conditioning, which is strictly the work of the coaches in the high school field.

Our season starts with the opening of school, and ends Thanksgiving Day. We have 13 schools, each with a varsity and a junior varsity team, and in all, in 1959, we had over 700 boys participating. Games are played as doubleheaders. A team plays one game per week, with at least five days between games, and there are no all-star games.

TEN COMMANDMENTS FOR TEAM PHYSICIANS IN FOOTBALL

Principles that have proven effective in the Boston High Schools for 40 years (2,200 games)

1. **Screening—All players must be screened by school physicians before starting season. Unfit are to be kept out: cardiacs, diabetics, hypertensives, those with one eye or one kidney and congenital defects.**
2. **Conservative Scheduling—Games should be scheduled with regard to equivalence of opponents. Consider question of epiphyses, loose joints and also size and capacity to play. Games should be cancelled in bad weather such as snow, rain and extreme cold, and should be shortened in intense heat. More substitutes should be used. Games should be no more than one per week, at least five days apart. Squad members should be forbidden weekend play on other teams.**
3. **Protective Equipment—Protective clothing and equipment must be provided, including pregame strapping of ankles. Low-cut shoes should be outlawed. Use of protective nose-piece results in less trauma to nose and face. It is the coaches' job to see that proper equipment is worn.**

Dr. Burnett is games surgeon for the Boston high schools, and an assistant professor for fracture teaching at the Boston University School of Medicine.

4. **Conditioning—Players should have three weeks' preliminary training to acquire conditioning, to acquire football know-how and to learn how to avoid injuries. High school coaches especially must provide this. Most serious injuries occur during the first three or four weeks of a season when many boys are playing for the first time and are out of condition. Smoking must be effectively prohibited. Season starts right after Labor Day, but the first game isn't played until October. Games are played on Monday through Friday afternoons. No all-star games. There must be at least 15 minutes' warm up before games.**
5. **Medical Supervision—A doctor must be in attendance at all games, and he must have undisputed authority with regard to the players' welfare. He must maintain liaison with the coaches and make sure that they agree with him on the relative importance of winning and of safeguarding the well-being of the players. The doctor should examine all injured players on the field, and should not delegate the job.**
6. **Immediate Examination of Injured—Immediate recognition and prevention of further aggravation of knee, head and abdominal injuries are essential. Players with knee injuries should not be allowed to return to the game on the same day. Players with head injuries should always be removed and studied.**
7. **Exclusion of Injured—Injured players must be taken out and kept out of games despite their protests. A good sub is much better than an injured star.**
8. **Follow-up—Ambulance and hospital facilities must be available for prompt care and there must be follow-up under adequate supervision. Fractures and dislocations must be reduced as soon as possible. Traction splints can be used to reduce and hold leg fractures. Reduction reduces the possibility of compounding fractures, eliminates the need for anesthesia and spares the patient a tough ride to the hospital.**
9. **Reconditioning—Well-trained personnel should be available for reconditioning injured players. Physiotherapy can be beneficial, but it can be abused.**
10. **Return to Play—No player may return to the practice drills or games without the specific approval of the doctor and a final check-up. No player may return until he is well. Bandages and adhesive strapping should help, rather than substitute for injured structures.**

HEAD INJURIES

One of the commonest injuries seen in the field of sports—particularly football—is a head injury. Concussions differ in severity, and offer a great challenge to anyone in the sports medicine field, for they are hard to diagnose, and it often happens that one needs some time in which to evaluate them properly. My first concern with a head injury is to diagnose it and determine the extent of the injury. Too often, emphasis is placed on returning the boy to the game. The usual procedure of slapping the face, shaking the head and using wet sponges and towels vigorously, in my opinion, is all wrong. These boys should be removed from the game and allowed time to revive and become oriented. I further believe that they should be allowed to clear their heads naturally without any artificial stimulation. A few, when so treated, can be returned to the game, but for the most part they should be kept out. My feeling is that a good night's sleep usually takes care of them. If, on arising the next day, a boy becomes dizzy or gets a headache, he should spend another day in bed. Patients with more involved cases—and they are few in number—should be sent to a hospital for further study. I repeat: these cases are often a puzzle, and whenever there is a doubt, they should be given the benefit of the same.

The latest figures from Dr. Floyd Eastwood show that 82 per cent of all the fatalities in football occur from head and spine injuries. It goes without saying that repeated concussions should disqualify any boy from further participation, for such an individual might otherwise sustain permanent brain damage.

KNEE AND ANKLE INJURIES

Another common injury is the traumatic knee. When a boy limps off the field, an immediate examination is made to find out whether or not the limp is due to his knee or his ankle. If his knee is the cause, he does not return to the game on that afternoon, regardless.

It is my feeling that the first injury to a knee is often of a minor nature, but if a boy is allowed to return to the game and the knee is injured a second time, the damage is usually more serious. *I repeat: our rule is never to let a boy who has injured his knee return to play later in the same game!*

Ankles are examined for the presence of a fracture, and this determination, as a rule, can be made quite readily when the boy is seen right after his injury. If there is a delay, however, the swelling becomes so great that the question is hard to answer without an x-ray. Ankles, as a rule, do well following injuries. Certainly, they do much better than knees. It is *not* our custom, however, to send a boy with a sprained ankle back into a game reinforced with Ace bandages, adhesive tape or any other such equipment. No boy, moreover, is allowed to play football with a plaster cast or other such equipment that might cause injury to another player.

X-rays are always taken when they are felt to be necessary. In that way, mistakes can be avoided. Our treatment for acute knee and ankle injuries is to apply a pressure dressing with sponge rubber and an Ace bandage, and then apply cold packs, either in the form of a cold whirlpool bath, an ice bag or ice wrapped up in towels. Following this, bed rest for 48 hours, elevation and crutches are highly desirable. Thereafter, physiotherapy is administered by competent physiotherapists. At

this point let me say that physiotherapy can be overdone, and at times can be harmful if too vigorously or too enthusiastically performed. Under such conditions, an injury can be aggravated.

In the treatment of traumatic knees, it is my personal opinion that unless there is a fracture, dislocation or definite tear in the lateral ligaments, there is no place in the treatment for a plaster cast. I further believe that these knees should not be tapped, but if tapping is done, the strictest asepsis should be maintained and the job should be undertaken by someone who is thoroughly familiar with the procedure. Of late, so much having been said about tapping swollen knees, it has become almost routine for the younger doctors to tap every swollen knee they see. I recently had occasion to treat a boy who had had his knee tapped three times in one week. With that sort of treatment, to my way of thinking, one is asking for trouble!

Tapping, unless done properly, is often followed by a recurrence of the hemorrhage. I feel that better results can be obtained with proper pressure dressings and physiotherapy. Too long a total rest period is apt to create atrophy of the calf and thigh muscles, and in the long run will delay the return of the boy to the game.

All joints should be protected on a player's return to a game, but they should have completely recovered from their injury. Artificial help to make up for the slack inherent in an injured knee should be avoided. *The knee must be well before the boy returns to competition.* Failure to observe this rule often leads to permanent damage.

Of late, there has been an ever-increasing vogue of playing football in low-cut shoes. Some of the boys have even gone to the trouble of cutting their high shoes down to the low level.

It has been the custom in Boston for a great many years to strap all ankles prior to a game. We feel that by doing so we can reinforce the side wall of the ankle and minimize the number and severity of sprains. Some boys avoid the strapping, and invariably wind up with injured ankles. In view of the numbers of sprained ankles among boys playing in low-cut shoes, we feel that this fad should be terminated. Proper equipment should be available to all, and it should be the coaches' duty to see that it is worn. Had the available equipment been used, I believe that many injuries could have been avoided.

With few exceptions, it has been my custom to reduce all dislocations involving the finger, elbow and shoulder, and to line up all fractures as soon after the injury as possible. Having had a great deal of experience in the field of trauma, I am honestly of the opinion that fractures and dislocations are never easier to reduce than when they are seen immediately following the accident. All legs so treated are sent to a hospital in traction, using a half-ring Thomas splint. If these are reduced at once, the boy is spared a miserable ride to the hospital, is spared the possibility of compounding a leg fracture, and likewise is saved the necessity of anesthesia for reduction at the hospital. Delay is often occasioned by the doctor's reluctance to act until he can get a permit from the boy's parents. Sometimes they can't be reached until hours later. Then too, many doctors are reluctant to proceed without adequate x-rays and anesthesia. It is my feeling that neither of these requirements justifies delay in dealing with a boy who has just been injured.

PREVENTION OF INJURY

Football is a game which, at the high school level, should be permitted only when the teams that are to compete are comparable in sizes of squads, and in ages and weights of players. All of these angles should be considered when games are arranged. Too often, games are scheduled solely or primarily for the purpose of solving financial problems. One doctor declared after his team had engaged in an unequal contest: "We were not only badly beaten but had a lot of injuries, and the boys were so tired it took them three weeks to recover."

Weather should by no means be ignored. We have called games off in the past because of snow, rain and extremely cold weather. Early in the season, games have been shortened because of excessive heat. Once a game was called off at the end of the first half because of a downpour of rain and the resultant condition of the playing field.

Another practice that should be done away with is the boys' playing on non-school teams during week-ends. This doubling creates a lot of injuries, and is the cause of a great deal of absenteeism from school on Monday mornings.

A great deal has been written about the advisability of competitive sports for boys 14 to 18 years of age—with special reference to football. The concern here is over the question of loose ligaments, unstable joints and the possibility of damage to the epiphyses. It has been my experience that the epiphyses are seldom disturbed. In 1957 and again in 1958, we had a fracture dislocation involving the lower end of the femur with the epiphyseal line. I know of only one other case of this type that his occurred in the Boston system. By removing boys with injured joints—notably ankles and knees—and by not allowing them to return until their injuries have healed, we feel that we have avoided a lot of this risk. It is our custom to keep particular watch on a boy who has returned to active play following an injury. If such a boy shows any indication of a recurrence of his condition, he is immediately removed.

Personally, I feel that these boys are far better off participating in supervised play, where every care is taken for their safety. In the last analysis, the number of injuries can be reduced and those that do occur can be minimized as good coaching continues to provide adequate conditioning and to increase the youngsters' knowledge of how to play.

Primary Torsion of the Omentum

DANIEL F. CROWLEY, JR., M.D.

DES MOINES

PRIMARY TORSION of the omentum is perhaps an exciting disease only upon discovery. Nevertheless, although the literature on it is extensive, it is sufficiently uncommon so that a report of new cases, with observations and conclusions, seems worthwhile.

Van Meter and Floyd,[1] in reviewing a total of 314,469 admissions to the Lexington, Kentucky, hospitals, found only two cases of primary torsion of the omentum. Jackson,[2] in 1948, reported two cases of his own, and mentioned that only 70 cases had been recorded in the medical literature up to that time. Sterling and Goldsmith[3] found but three cases in the records of the Jewish Hospital, Philadelphia, for the decade 1940-1949. Davis, Mangels and Bolton[4] reported two cases in children, and stated that although primary torsion of the omentum was infrequent in adults, it was "exceedingly rare" in children.

These reports and statistics all indicate that this is quite a rare disease, although Sterling and Goldsmith[3] are no doubt skeptical following a survey in which they found 72 previously unreported cases by polling 293 surgeons in five urban communities. But whatever the statistics, a review of the literature on this subject reveals as number of single-case reports, in each of which the author has conveyed the impression that he has come upon a strange and novel entity.

CLINICAL CHARACTERISTICS

Torsion of a portion of the omentum due to hernia, adhesions or inflammation of an intraperitoneal viscus has been referred to as secondary torsion of the omentum. Primary torsion is an idiopathic situation in which the cause is unknown or unclear. Various etiological factors for primary torsion have been considered, the most prominent of which have been trauma and excessive exertion. Almost all cases have occurred on the right side of the abdomen. The right side of the greater omentum is longer, larger, heavier and even more mobile,[2] and therefore presumably more prone to twist upon itself. It has been said that obesity may be a factor, and a careful reading of reported cases bears this out. The pathology is that which would reasonably follow torsion and strangulation of a segment of omentum—hemorrhage and necrosis.

Clinically, the course of the disease simulates acute appendicitis,[5] and as in acute appendicitis the specific findings, as reported, show wide variations. The temperature may be normal or markedly elevated. The white blood count may range from a slight elevation to 16,000-20,000/cu. mm. Nausea and vomiting may be present, although it is alleged that these are less frequent than in appendicitis. Neither constipation nor diarrhea characteristically occurs. The pain and tenderness usually localize to some extent in the right lower quadrant. Variable degrees of muscle spasm and rebound tenderness have been reported. A palpable mass is occasionally present. The majority of cases are operated upon with a preoperative diagnosis of acute appendicitis.

CASE REPORTS

The following three cases of primary torsion of the omentum are presented because of the young ages of the patients, because of the clarity with which they illustrate the features of this unusual disease and because of the conclusions that can be drawn from them.

Case No. 1. J. B., a 19-year-old male, was admitted to Mercy Hospital, Des Moines, on May 17, 1958. Three days prior to admission, while working on a farm, he had had an onset of abdominal pain, and it had persisted. The pain gradually localized to some extent in the right mid-abdomen and the right lower quadrant. The family physician gave penicillin and a low enema, without relief. There was no nausea or vomiting, and no constipation or diarrhea.

Physical examination revealed marked abdominal tenderness midway between the right costal margin and McBurney's point, with a high degree of muscle guarding and rebound tenderness.

The white blood cell count was 16,600/cu. mm., and the urinalysis was negative.

The patient was operated upon the day of hospital admission. The preoperative diagnosis was acute abdomen, probably acute appendicitis.

A right lower rectus muscle-retracting incision was made. The appendix was partially retrocecal, and was mobilized with some difficulty. It did not seem inflamed. Further exploration revealed a twisted necrotic portion of greater omentum loosely adherent to the anterior peritoneum midway between the region of the appendix and the gallbladder. Both the necrotic portion of the omentum and the appendix were removed.

The patient's postoperative course was uneventful.

The pathology report described the hemorrhagic

Dr. Crowley made this presentation at a meeting of the Medical Forum Club, in Des Moines on March 21, 1960.

necrotic omentum, and a "chronic appendicitis with periappendicitis."

Case No. 2. A. W., an 11-year-old boy, was admitted to Mercy Hospital, Des Moines, on December 11, 1958. Two days prior to admission, he had been struck in the abdomen by a classmate while they were playing on the school grounds. He had complained of a "stomach ache" following the incident, and the abdominal distress had become progressively worse. There was no nausea or vomiting, and no constipation or diarrhea. Anorexia was present, and a mild fever. Movement aggravated the pain. He obtained some relief by lying doubled-up.

The patient was seen by his family physician several hours before the hospital admission, and was sent home. Later in the day, he was rechecked and hospitalized.

Physical examination revealed an obese boy in moderate distress. There was marked right lower quadrant tenderness, with pronounced muscle spasm and rebound tenderness. A rectal examination was negative. The temperature was 100.8°F., and the pulse was 92 per minute.

The white blood cell count was 11,000/cu. mm., and the urinalysis was negative. A chest x-ray was negative.

The patient was operated upon the day of his hospital admission. The preoperative diagnosis was acute appendicitis.

A right lower rectus muscle-splitting incision was made. A large necrotic mass of omentum was readily apparent lying beneath the rectus sheath in the anterior part of the peritoneal cavity. The appendix did not seem to be inflamed. The necrotic portion of omentum was removed, as was the appendix.

The postoperative course was uneventful.

The pathology report described the necrotic hemorrhagic omentum, and a "subsiding acute appendicitis."

Case No. 3. M. W., a seven-year-old male, was admitted to Raymond Blank Memorial Hospital for Children, in Des Moines, on September 29, 1959. He had become ill on the day before his hospital admission, and had complained of abdominal pain and nausea. The pain had persisted and anorexia was present. There was no vomiting, and the nausea had receded prior to hospitalization. Bowel movements were normal. The patient had eaten a considerable quantity of popcorn before the onset of pain.

Physical examination revealed a moderately obese boy in no obvious distress. He was more comfortable when lying doubled-up. There was marked right lower quadrant tenderness with rebound, and mild muscle spasm. The temperature was 98.6°F.

The white blood cell count was 12,600/cu. mm., with 72 per cent neutrophils. The urinalysis was negative.

The patient was operated upon the day of his hospital admission. The preoperative diagnosis was acute appendicitis.

A McBurney incision was made. When the peritoneum was opened, a very large quantity of old, dusky bloody fluid exuded. The appendix appeared to have a certain amount of periappendicitis, but did not appear to be the site of significant pathology. Further digital exploration revealed a hard mass in the region of the mid-ascending colon, well posterior. It was impossible to examine the mass further through the McBurney incision.

A right upper and mid-rectus incision was then made, and the peritoneal cavity entered through the second incision. The mass was accessible, and proved to be a hard, necrotic portion of omentum, about 5.0 cm. x 4.0 cm., densely adherent to the ascending mesocolon almost at the hepatic flexure. The necrotic segment of omentum was mobilized by blunt dissection, and excised. The appendix was removed.

The patient's postoperative course was uneventful.

The pathology report described the hemorrhagic necrotic omentum, and an "incidental appendix."

DISCUSSION

These three cases are not the grand total of cases seen in an institution or even of those seen on a "service." Rather, they are those that were encountered in the recent private practice of a single surgeon. A few cases, of course, do not provide a reliable statistical study of frequency, for probabilities and chance can be very capricious. But they can and do lend substance to a suspicion that primary torsion of the omentum, although admittedly a singular disease, is possibly not a rare one. This conclusion may be difficult to accommodate to the statistics of Van Meter and Floyd[1] (two cases out of 314,469 hospital admissions), but it supports the implication of the survey by Sterling and Goldsmith[3] that more cases are seen than published reports would suggest. In an appraisal of reported frequency, two other considerations come to mind—the unoperated case and the overlooked case. Both of these possibilities will be discussed later.

Two of the three cases reported here were in children—one seven years old and the other eleven. Here again, doubt may be raised as to whether this disease is so rare in children as previous reports would indicate.

Obesity has been repeatedly mentioned in the literature as a predisposing cause of primary torsion of the omentum. These cases are confirmatory in that respect. The two children were definitely of obese physique, and the nineteen-year-old, though tall, could be described as somewhat burly.

A rather subtle aspect of all three cases is difficult to describe precisely. Each of these cases presented a clear-cut surgical indication. Each

possessed the most pertinent signs of an acute abdomen—tenderness, spasm and rebound. And each had other features which, at the very least, were compatible with an acute abdomen. Yet, in spite of this and the dispatch with which they were operated upon after being seen in the hospital, there remained a preoperative doubt about the validity of the surgical indication. The patients did not seem to be so sick as the intensity of their abdominal signs would have led one to expect. Everything pointed toward a surgical emergency except a vague clinical impression. It is of interest to recall, in this regard, that two of these cases, when first seen by family physicians, were not considered surgical. In one instance an enema and penicillin were given, and in the other the patient was sent home to be rechecked later.

Perhaps many cases, undiagnosed and unoperated upon—having been given treatment analagous to an enema and penicillin—progress to complete recovery. MacLean[6] believes that the pathology will probably resolve and fibrose if left alone. This, of course, is not subject to absolute proof, but it is known that substantial portions of omentum, in the aggregate, can be ligated without untoward result when one is dealing with extensive omental adhesions.

Jackson[2] cautions against overlooking a torsion of the omentum at the time of surgery, and MacLean[6] mentions that the condition may not be discovered if the incision is small and the exploration inadequate. Obesity and a McBurney incision may well conspire to impede adequate exploration. Case No. 3 could have been one of this sort if bloody fluid had not impelled the most thorough exploration. Bloody peritoneal fluid, incidentally, is fairly common, and has been observed by Sterling and Goldsmith,[3] Gilliam[7] and others.[8,9]

The unoperated cases and the overlooked cases —there could be many of them.

Several case reports[1, 4, 10, 11, 12] mention coexisting appendiceal pathology. Ellenburg[13] notes that of 50 cases reported in the literature and studied, 54 per cent manifested coexisting diseases that the authors considered non-contributory to the torsion. Ellenburg concludes, however, that the frequency of an associated inflammatory process may be a factor in initiating the torsion, and quotes Schoenholzer's 1911 dictum: "No inflammation—no torsion." Both Case No. 1 and Case No. 2 in this report had associated appendiceal pathology determined microscopically, although in each case the appendix was evaluated as normal at the time of the operation. It is difficult to believe, upon reflection, that the inflammation (seen here and so commonly reported by others) and the torsion are coincidental. A more logical conclusion would be that the inflammation precipitated the torsion, and those cases without inflammation are, in truth, cases with undiscovered inflammation. Although traditional terminology has been used in the preparation of this paper, it is suggested that a distinction between primary and secondary torsion is misleading and should be permitted, in the manner of old soldiers, to fade away. A more suitable terminology would be torsion of the omentum secondary to a specified cause, or secondary to an unknown cause.

SUMMARY

Three cases of primary torsion of the omentum have been presented, two of which were in children. The preoperative diagnosis in one case was acute abdomen, probably acute appendicitis, and in the other two it was acute appendicitis.

A total of three cases seen in the author's recent private practice suggests to him that primary torsion of the omentum is not so rare in general, nor so rare in children specifically, as previously published reports would indicate.

All three patients were of obese physique, confirming a frequently reported circumstance.

The three cases all presented a discrepancy between the presence of very definite signs of an acute abdomen and a more benign, though vague, clinical impression. Two of the three cases were not regarded as surgical when first seen by family physicians.

Others have considered the possibility, and it is here proposed, that many cases may never come to surgery, or may be overlooked at the time of surgery, and yet go on to complete recovery. This premise is advanced to account for the paucity of reported cases.

Two of the three cases had associated appendiceal pathology, a common finding in previously reported cases. It is believed that all cases are secondary to other intraperitoneal pathology, whether found or not, and that future terminology should be changed so as to eliminate the distinction between primary and secondary torsion.

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Fundamental Aspects of Diabetes Mellitus

L. C. SMITH, Ph.D.

VERMILLION, SOUTH DAKOTA

MODE OF ACTION OF INSULIN

AT LEAST THREE mechanisms of insulin action have received experimental support. Two of these could explain the *under-utilization* of glucose at a normal blood sugar level, and the other could explain the *over-production* of glucose in the absence of insulin.

1. Enhancement of cellular permeation. Levine *et al.*[1] concluded in 1950 that the metabolic effects of insulin could be explained by its primary action on a cellular transfer mechanism, bringing about a rapid entry of sugar into the muscle cell. Galactose was injected intravenously into eviscerated dogs, and its distribution was calculated from the level in the circulation after equilibration. In view of the fact that there was no renal elimination or utilization of galactose, the results showed that insulin enhanced the transfer of this metabolically inert sugar across the cell membrane. In 1955, Stadie,[2] using a rat diaphragm, demonstrated that growth hormone and related pituitary factors will antagonize the enhanced permeation of glucose brought about by insulin, and that the adrenal corticoids augment this inhibition. Thus, insulin and its antagonists control the rate of entry of glucose into the cell (Figure 1).

2. Activation of hexokinase. Available data also tend to show that insulin controls the entry of glucose into the active metabolic pool by enhancing the activity of hexokinase which catalyses the phosphorylation of glucose to glucose-6-phosphate. This theory of insulin action is based on the *in vitro* work of Cori *et al.*[3] who showed that a pituitary factor normally inhibits hexokinase in cell-free extracts of muscle. They further demonstrated that insulin did not enhance the phosphorylation of glucose in the absence of this pituitary factor, but that it could effectively remove the pituitary inhibitory action. The work of the Cori group has recently been confirmed, in part, and it would appear that the inhibition of the phosphorylation of glucose in the absence of insulin is a definite biochemical lesion (Figure 1).

3. Control of hepatic glucose-6-phosphatase activity. In 1954, Ashmore *et al.*[4] demonstrated a significant three-fold rise in the activity of glucose-6-phosphatase in liver slices from alloxanized rats. This rise could be reversed by the administration of insulin. Since an increase in the activity of this enzyme will cause an excessive production of glucose by the liver, the blocking of its action by insulin may control one of the two principal defects in the diabetic organism, namely the overproduction of glucose (Figure 1).

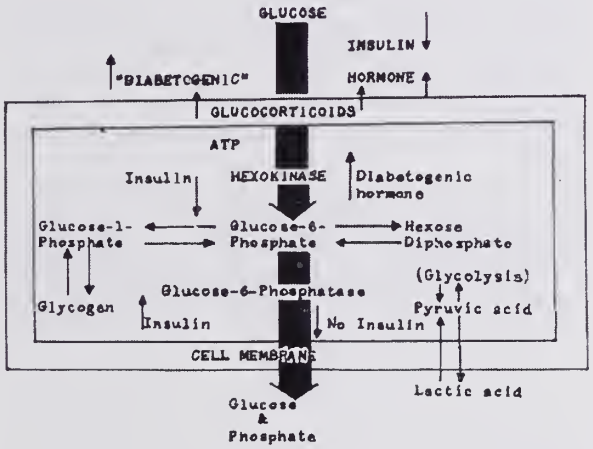


Figure 1. Three possible mechanisms of insulin action: (a) (lower center) excessive glucose production caused by increased glucose-6-phosphatase activity in the absence of insulin; (b) (upper center) enhancement of cellular penetration of glucose by insulin; and (c) (center) activation of hexokinase by insulin.

It is conceivable that a common denominator may exist at the enzyme level for all the established modes of action of insulin. In this sense, insulin would serve to control the activity of such enzymes as hexokinase, glucose-6-phosphatase and those enzymes concerned with cell-membrane permeation. The net effect of such an action would be to increase the peripheral uptake of glucose and to diminish hepatic glucose production, thus establishing insulin's unique physiological role in lowering blood sugar.

MECHANISMS INVOLVED IN CARBOHYDRATE BREAKDOWN

Intermediary metabolism in general is characterized by an orderly and stepwise breakdown of metabolites, leading to a slow release of free energy with an exceedingly high efficiency of about 60 per cent. The end result consists in the creation of high-energy phosphate bonds in the adenosine triphosphate or ATP pool. Then ATP, in breaking down to ADP and inorganic phosphate, liberates energy in a process which is directly coupled with the vital physiological processes

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such as muscular contraction and nervous stimulation (Figure 2).

Glycolysis and aerobic metabolism. The transformation of carbohydrate to lactic acid is termed glycolysis. It occurs in muscle, liver and most other tissues. Some of the lactic acid formed during this anaerobic process is oxidized in the aerobic recovery phase, while varying amounts are resynthesized into glycogen.

Two key substances may be considered in detail as important constituents of the biochemical lesion in diabetes:

1. Glucose-6-phosphate (see Figure 1). This compound may follow any of the following pathways:

a. It may be transformed into glucose-1-phosphate, and thus incorporated into glycogen.
b. It may be hydrolysed under the action of glucose-6-phosphatase back to free glucose in the liver and to some extent in the kidney, but not in the muscle.
c. It may be changed to hexose-1,6, di-phosphate, then ultimately converted to pyruvic acid.

2. Pyruvic acid (see Figure 2). This substance, or its reduction product lactic acid, represents the terminal on the anaerobic pathway of carbohydrate breakdown, and a crossway in the oxidative breakdown of protein and most amino acids. Pyruvic acid may enter into the aerobic phase of carbohydrate breakdown by combining with CO_2 to form oxaloacetate, a component of the citric acid cycle. However, the main fate of pyruvic acid is the conversion to acetyl coenzyme A (active acetate). This active acetate then combines with oxaloacetate to enter the citric acid cycle. Thus, through this citric acid cycle, which consists of a series of oxidative and decarboxalative reactions,

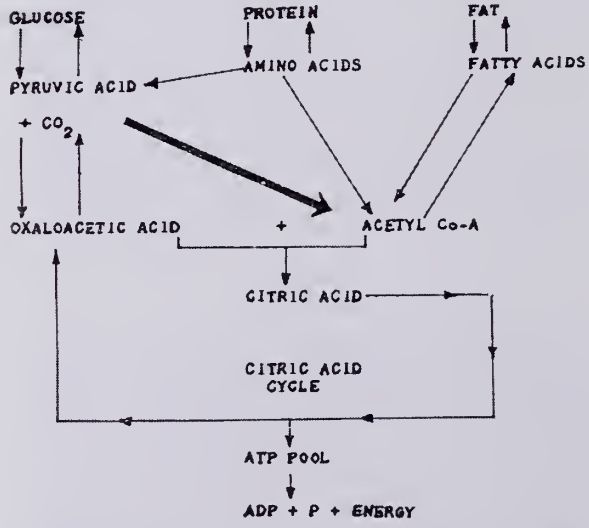


Figure 2. Interrelationship of carbohydrate, fat and protein metabolism.

pass most of the carbohydrate, fat and expendable protein of the body, contributing the necessary energy for the formation of high-energy phosphate bonds.

BIOCHEMICAL CHANGES INDUCED BY INSULIN DEFICIENCY

In the presence of an absolute or relative insulin lack, the acceptance of essentially inert glucose into the glycolytic cycle takes place at a considerably reduced rate. To obtain a normal utilization in the depancreatized, hepatectomized dog, the blood sugar levels must be approximately twice normal. We have already discussed possible reasons for this defect.

Through the use of C^{14}-labelled glucose in juvenile and obese middle-aged diabetics, Miller *et al.*[5] were able rather broadly to sketch the changes brought about by absolute and relative insulin deficiencies in man (Figure 3). Glucose production by the organism was increased 50 and 100 per cent, respectively, in the two groups when compared to the normal. Glucose oxidation was reduced only in the juvenile insulin-lack type, by about 75 per cent. The conversion of glucose to fat and glycogen, however, was reduced 85 per cent in both forms of diabetes, and thus the conversion of glucose to stored energy was most significantly affected by insulin lack.

THE BIOCHEMICAL LESION OF INSULIN DEFICIENCY

The phosphorylation and breakdown of glucose are markedly retarded by insulin lack. Glucose rises in the blood. Glycolysis proceeds only with glycogen as the starting point, while glucose cannot be utilized at the normal rate. As a consequence, production of pyruvic acid, and thus of the oxaloacetate pool, will be markedly reduced. For this reason, the trapping of acetyl coenzyme A (active acetate) by the citric acid cycle of the liver will be reduced. The accumulated acetyl Co-A condenses to form acetoacetic acid, unable to enter the citric acid cycle in the absence of its usual partner, oxaloacetic acid. This final oxidative pathway of all intermediary metabolism of protein, fat and carbohydrate thus becomes insufficient, and the production of high-energy phosphate bonds is markedly curtailed. The primary biochemical lesion of diabetes—*i.e.*, the slowing of the glycolytic utilization of glucose—thus leads to secondary changes in the many phases of intermediary metabolism.

This concept is supported most strongly by the demonstrated fact that fructose undergoes glycolysis in the diabetic, and can rectify the abnormalities in carbohydrate, fat and presumably protein metabolism in liver slices from diabetic organisms as well. This is true because of the presence of an insulin-independent fructokinase

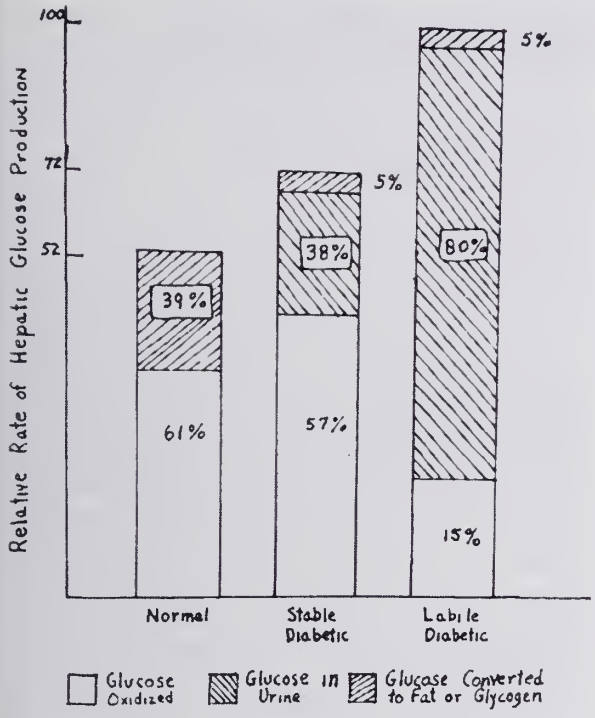


Figure 3. Fate of C^{14}-labelled glucose administered to normals, stable (adult) diabetics, and labile (juvenile) diabetics. Note that there is a reduction in glycogenesis and lipogenesis in the stable diabetic, although glucose oxidation is normal. (Modified from Miller.[5])

in the liver, and to a lesser extent in the muscle and brain (Figure 4).

THE BIOCHEMICAL LESION OF KETOSIS

A critical supply of pyruvic acid and oxaloacetate is necessary to trap acetyl coenzyme A arising from the oxidative breakdown of fatty acids, and thus to carry on their oxidation through the citric acid cycle. When, as in diabetes, the hepatic glycolytic cycle is decreased because of poor glycogen stores and a reduced rate of phosphorylation of glucose, the supply of pyruvic acid and consequently of oxaloacetic acid becomes inadequate to assure the entry of the acetyl Co-A radicals into the citric acid cycle, and they condense, instead, to form acetoacetic acid. Other ketone bodies arise, in turn, from acetoacetic acid when ketosis is severe. Under normal circumstances, acetoacetic acid serves as an intermediary in lipogenesis—*i.e.*, the formation of fatty acids from acetyl radicals. In the presence of poorly functioning glycolysis, however, hepatic lipogenesis nearly ceases. Stetten and Boxer,[6] in 1944, using deuterium-labelled glucose in rats, found that about 40 per cent of the glucose was normally converted to neutral fat, in contrast to less than four per cent in alloxan diabetic rats. Insulin apparently does not have a primary action in promoting lipogenesis, since fructose, independent of insulin for its phosphorylation and glycolytic breakdown, will establish normal lipogenesis in liver slices from alloxan diabetic rats. Thus, the catabolic pathway of glucose appears to be coupled intimately with hepatic lipogenesis, apparently serving as a specific energy-supplying mechanism for fat formation.

There is no impairment of the peripheral utilization (muscle, kidney, heart, etc.) of ketone bodies in the diabetic. The supply of pyruvic or oxaloacetic acid in muscle appears adequate to assure the oxidative removal of acetyl groups, in spite of some impairment of glucose utilization in the diabetic organism.

Although the acetyl groups fail to condense to form natural fat in the liver in uncontrolled diabetes, they do form excessive amounts of cholesterol. A marked elevation of cholesterol and the beta-lipoprotein fraction carrying it in the plasma has been noted repeatedly in the diabetic coma.

BLOOD SUGAR-LOWERING AGENTS IN DIABETIC MANAGEMENT

For the past four years, seven compounds have been available as oral blood sugar-lowering agents. The first group are known as the sulfonylurea compounds. Significant toxicity eliminated carbutamide from further clinical trials, but the relatively non-toxic tolbutamide (Orinase) has gained ever-increasing clinical application. One of the newer agents, chlorpropamide (Diabinase) appears to have enhanced potency and to be gaining in usage. Metahexamide was removed from clinical trial in May, 1959, because of serious hepatic lesions apparently due to the metahexamide.

The second group are known as biguanide compounds. One derivative is known simply as DBI.

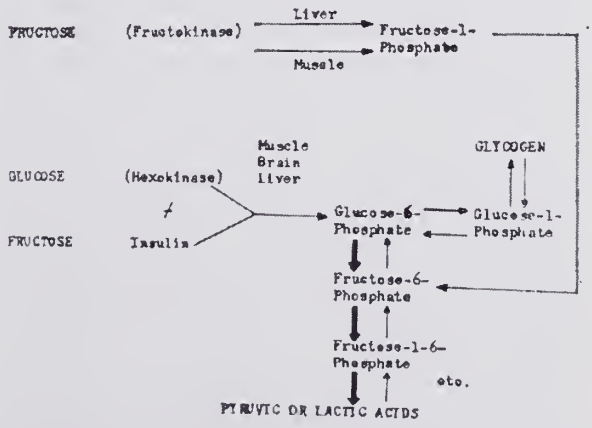


Figure 4. Significant differences in the metabolic pathways of glucose and fructose. Note that fructokinase, not requiring insulin for its activity, allows this sugar to be utilized completely in the diabetic liver for glycolysis and glycogenesis.

The other two analogs are the normal amyl (DBB) and the normal butyl (DBV) biguanides. The three preparations appear to vary only in their degrees of effectiveness in lowering blood sugar.

Mechanism of action of sulfonylurea compounds. Considerable evidence has accumulated suggesting that the pancreatic beta cells are the main target for the hypoglycemic action of the sulfonylurea drugs. Originally, in 1944, it was shown that these compounds lower the blood sugar in the normal and in the partially pancreatectomized dog, but not in the completely depancreatized nor in the severely alloxan-diabetic animal.[7]

Morphologically, it has been shown that when administered over prolonged periods, the sulfonylureas produce degranulation of the pancreatic beta cells of rats, rabbits and dogs.[8] Furthermore, it has been shown that this pancreatic beta-cell degranulation is not due to the hypoglycemia that accompanies administration of the drug, but is rather a primary effect of the drug on the beta cells.[9] This degranulation is, therefore, thought to reflect increased insulin output from the beta cells under the influence of the drug. It was demonstrated, furthermore, that when the pancreas is functioning at maximal capacity and there is no insulinogenic reserve, as indicated by complete degranulation of the beta cells, the sulfonylureas do not cause hypoglycemia.[9] This finding is interpreted to mean that in order for the sulfonylureas to be effective, some pancreatic insulinogenic reserve must be present.

The relative effectiveness of the sulfonylureas in various types of human diabetes supports the idea that the pancreas is the primary target of these drugs. Juvenile diabetes, which is frequently of the insulin-deficiency type, usually does not respond to the sulfonylureas, and often the pancreas shows loss of islet tissue. On the other hand, patients with maturity-onset diabetes may have considerable insulinogenic reserve, with adequate or only moderately diminished islet tissue. Furthermore, it has been shown that many adult diabetics show good beta-cell granulation, as well as adequate extractable pancreatic insulin. These findings suggest that most maturity-onset diabetics have varying amounts of residual pancreatic insulinogenic ability that is not utilized when they are treated with insulin alone. Furthermore, it is suggested that diabetic patients who respond to tolbutamide alone probably have adequate insulinogenic reserve but a defect in the normal mechanism for controlling the blood sugar by increasing the insulin output.

Mechanism of action of the biguanides. These compounds are capable of exerting potent blood sugar-lowering action in all types of diabetes, and thus quite naturally have created considerable furor regarding their ultimate role in diabetic management—in particular with respect to their possible value in replacing insulin in younger and more severely afflicted patients. In addition to lowering blood sugar in normal, alloxan diabetic, depancreatized, eviscerated and hepatectomized animals, as well as in diabetic human beings, DBI produces a number of metabolic effects such as (1) an increase in glucose uptake; (2) a decrease in glycogen storage; (3) an increase in lactic acid production; (4) a decrease in glucose oxidation; and (5) a decrease in gluconeogenesis.[9]

The mechanism by which these metabolic effects are produced and blood sugar is lowered appears to be an increased anaerobic glycolysis, occurring as a result of decreased oxidation via the Krebs citric acid cycle. In other words, the block may produce an inhibition of the Pasteur effect. The resulting increase in glycolysis will provide a greater glucose utilization, with an accompanying increase in lactate in all tissues to which DBI may gain access. It is suggested that the liver may be such a site of action. The biguanide may not, however, enter muscle cells of the extrahepatic tissues, and thus may fail to produce a similar effect in these sites. The lactate produced in the liver then would be readily oxidized by the muscle cells. A mechanism such as this could result in a lowering of the blood sugar in diabetic patients.[10]

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Attend the
A.M.A. CLINICAL MEETING
Washington, D. C.
November 28-December 1, 1960

The Management of Poisonings

With Special Reference to Poisonous Snakes and Plants in Iowa, and to Rabies

EVERETT A. NITZKE, M.D.

DES MOINES

Poison centers, poison control centers or poison information centers, as they are variously called, are relatively new institutions. The first was created as recently as 1953, in response to an ever-increasing awareness that accidents, particularly poisonings, have been responsible for larger and larger shares of deaths among children.

In the first years of this century, infectious diseases such as diphtheria, influenza, pneumonia, tuberculosis and enteritis caused the greatest loss of life in the younger age groups. Accidents ranked high as a cause of death among the smallest children, but still well below the infectious diseases. Fatal accidents occurred more frequently among youngsters 5-14 years of age, but even among them, infectious diseases were a prominent cause of death.

Over the years, through the use of improved hygienic measures and, more recently, through the use of the antibiotics, many of the infectious diseases have been virtually eradicated. Certainly such diseases as diphtheria and smallpox are now almost nonexistent, and tuberculosis has no more than a small fraction of its incidence 50 years ago, particularly among children. In the older age groups, heart disease, degenerative diseases of the blood vessels, cancer, etc. still outrank accidents as a cause of death, but among individuals under 24 years of age, accidents have emerged as the most important killer.

As one might have expected, the greatest number of accidental deaths are caused by motor vehicles. Lesser numbers are caused by burns, falls, drownings and poisonings.

Poisonings cause nearly five per cent of all fatal accidents among children in the 1-4 year age group. This five per cent figure, however, is somewhat deceptive, and one must avoid thinking that it shows poisoning to be a very minor medical problem. Only a very small number of the youngsters who ingest poison die from it. In various reports, the ratios have ranged anywhere from two to three hundred cases of poisoning for every fatality.

THE POISON CONTROL CENTER SYSTEM

In view of these figures and trends, the Academy of Pediatrics established its Committee on Accident Prevention in 1950. One of the first things that the group did was to circulate a questionnaire asking Academy members to supply information on the frequency of various types of accidents that are encountered in pediatric practice. A rather surprising finding was that accidental poisonings accounted for 50 per cent of all accidents reported, with another 30 per cent involving burns. Thus, you see, the problem of poisoning in childhood is a major one.

In 1954, the Committee on Accident Prevention established a Subcommittee on Accidental Poisoning. The first poison control center was developed in Chicago, and others were subsequently set up in New York, Boston and the other larger cities. In Florida, a network of some 16 stations was established, covering the entire state. With epidemic rapidity additional centers have been formed, until at the present time there are more than 300 located in all parts of the United States.

The function of the individual poison control center varies, but each of them supplies information. The question of who shall be supplied information concerning toxic substances has aroused a great deal of discussion. It is the stated policy of many of the centers (including our own) that treatment information shall be provided only to physicians. This caution stems in part from the remote but nevertheless definite possibility of medicolegal action if this advice were given directly to lay persons. The physician receiving the information has the responsibility of carrying out

Dr. Nitzke, a pediatrician, is director of the Poison Information Center at Iowa Methodist Hospital, Des Moines. He made this presentation at the Postgraduate Medical Education Course co-sponsored by the Iowa State Medical Society and the Pottawattamie County Medical Society, in Council Bluffs on October 15, 1959.

For information on

DIAGNOSIS AND MANAGEMENT OF SUSPECTED POISONINGS

call the

Poison Information Center
Iowa Methodist Hospital, Des Moines
ATlantic 8-7271, Ext. 239

the recommended therapy as he sees fit. Thus, the center is not placed in the position of practicing medicine.

One of the functions of a poison control center is, of course, to help prevent poisonings by conducting educational campaigns, and in that phase of its work, it must deal directly with the public. If its work of that sort is effective, increasing numbers of people come to know about the center and will phone in directly, rather than to their own physicians. Some centers are set up in such a way as to provide treatment, but most of them —including our own—simply give advice.

Some of the larger centers are equipped to carry on research projects. A final but nonetheless important phase of the long-range work of the centers is that of reporting data regarding cases of poisoning. This reporting of data fulfills two functions. First, it permits the cataloging of ingestible substances hitherto unrecognized as poisons, and second, it facilitates the tabulations of national statistics that will subsequently be useful as a basis for educational and preventive measures.

NATIONAL CLEARING HOUSE FOR POISON CONTROL CENTERS

In early 1957, representatives from various poison control centers throughout the country met in New York City. They decided it would be wise to form what has come to be known as the National Clearing House for Poison Control Centers. Since the local centers had been variously sponsored, the National Center was set up, not to provide a central governing agency, but rather to serve as a strategically located coordinating service for activities in which the local centers might individually choose to cooperate.

SOME STATISTICS ON POISONINGS

A tabulation of a considerable number of accidental poisonings has shown that approximately one-third were due to the ingestion of medicines. Household preparations accounted for one-fifth of the total number, and almost as many resulted from ingestion of cleansers of various sorts. Cosmetics were responsible for a little over one-tenth of the cases, and economic poisons such as pesticides, solvents and miscellaneous substances accounted for the remainder.

A partial summary of the cases recorded at the center located in Iowa Methodist Hospital, Des Moines, up to and including December, 1958, shows that during a 15-month period a total of 243 patients were involved. Of those patients, 114 (almost 47 per cent) had ingested medicines of one type or another—68 of them (28 per cent of the total) having taken dangerous amounts of aspirin. This is almost exactly the incidence that has been reported for the country as a whole. Among the 39 patients who had been poisoned by household preparations, there were 15 cases of poisoning by soaps and detergents and five by bleaches. There was a rather high incidence of poisoning due to pesticides. Of the 30 such cases, 19 had involved insecticides and the remainder, for the most part, rodenticides.

The National Clearing House has also tabulated the ages of our patients. As might have been expected, the peak incidence occurred among the 2-3 year olds, for such youngsters get around nimbly, climb and get into more and more things, and are becoming adept at opening containers. At this age, however, they don't have sufficient judgment to distinguish between the things that will harm them and those that won't.

In our Des Moines list—again resembling the national one—there was a slight predominance of boys.

Additional tabulations were made of the rooms where the substances were found. At the top of the list in almost every study is the kitchen, and either the bedroom or the bathroom is second. The explanation, I suppose, is not only that household products are most often kept in those rooms, but also that they are stored in accessible locations there.

Many of the substances were not in their customary locations when children got into them, and hence the more specific tabulations showed the poison to have been accessible to children because it had been left on top of a piece of furniture or on the floor. Cabinets—particularly bathroom cabinets—represent danger areas, probably because youngsters can reach them merely by standing on a chair or stool.

Often the poisons were not in their original containers, and the misleading label or no label at all was responsible for the accident. A classic example is the case in which a mother poured a small quantity of disinfectant into a vitamin bottle for use during an automobile trip to California, and on returning put the bottle on the shelf alongside the regular vitamin bottle. You know the rest of the story. She simply picked up the wrong bottle and gave her baby some of the contents. In another instance, a "chemical garden" containing lye had been started in a drinking glass.

The times of day were tabulated, and curiously enough, the latter part of the morning and the latter part of the afternoon were shown to have been peak periods for poisonings.

Poison control centers have as yet barely started the phase of their activities that is likely to prove most beneficial. That is the education of the public in regard to appropriate preventive measures. For this purpose, folders have been printed especially for distribution by doctors, and booklets published by health departments and insurance companies are available. Other printed materials are in the planning stage, and broadcasts over radio and TV will be used to awaken people to the problem.

POISONOUS SNAKES

Though poisonings from snakebite or from the ingestion of poisonous plants are relatively infrequent, they are subjects that deserve occasional review, since many physicians will have had no recent acquaintance with them.

From a purely scientific standpoint, most snakes must be considered venomous, for they possess a more or less well-developed gland on each side of the head that yields a viscous secretion capable of exerting a toxic or destructive action whenever it comes in contact with the inner tissues of animals. From a practical standpoint, however, only those snakes are considered poisonous which, upon biting or stabbing, are able to inject the secretion more or less deeply into the tissues of their prey.

There are two groups of the latter sort of snakes (Figure 1). The first consists of those snakes which have fixed rather than movable fangs, and have relatively small mouths which they must close and with which they must hold the victim in order to inject their poison into the deep tissues. The coral snakes are the only representative of this group in the United States. Outside this country, some examples are the cobra, the black mamba and the very small krait, of India.

The second group consists of the pit vipers, so-called because on each side of the snout and between the eye and the nostril, they bear a supplemental pit or hole which is never found in other snakes. In the United States, the representatives of this group are the copperhead, the cottonmouth moccasin, the massasauga, the pigmy rattler and over a dozen other rattlesnakes. Examples elsewhere in the world are the African puff adder, the fer-de-lance of Central and South America, and the bushmaster of the same area.

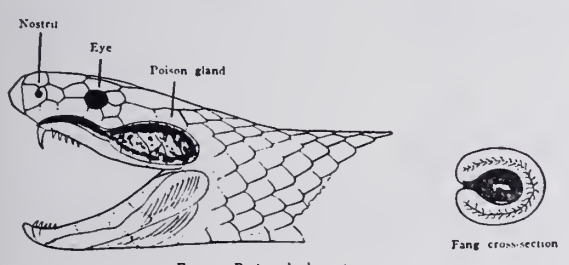


FIG. 1.—Proteroglyphous type.

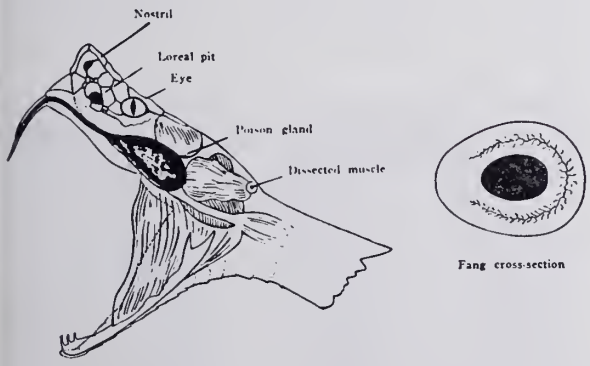


FIG. 2.—Solenoglyphous type.

Figure 1. Most snakes must be considered venomous, but the dangerous ones are those which, in biting or stabbing, can inject venom more or less deeply into the tissues of their prey. Above is the biting type of snake, with small mouth and fangs (coral snake). Below is the stabbing type, with wide mouth and long, movable fangs (rattlesnakes).

Incidence. Reliable information on the number of snakebites or snakebite deaths is difficult to obtain, at best, but the World Health Organization has collected approximate figures for a number of areas of the world (Figure 2). These figures indicate that Southeastern Asia has the highest death rate from snakebite. India, as a whole, reports some 7,000 to 12,000 snakebite deaths each year. The area of next-greatest incidence is tropical America, where the snakebite mortality is about 3,000-4,000 annually. North America has some 300-400 snakebite deaths per year, but only a minor number of them occur in the United States. In recent years, the total number of deaths from poisoning from all types of venomous fauna in the United States has ranged between 40 and 78, and this number includes deaths from scorpions and black widow spiders. Most of these are probably due to rattlesnakes, particularly the eastern and western diamondback rattlesnakes, which do not occur in Iowa (Figure 3).

Snakes in Iowa. Four poisonous reptiles occur in Iowa. The commonest of these is the timber rattlesnake, *Crotalus horridus,* which is found for for the most part of the hilly area of northeastern Iowa, in a dozen or so counties in the southeastern corner of the state and in a small area of Madison County near Winterset.

The next commonest type, almost as common as the timber rattler, is the small rattlesnake known as the Massasauga, *Sistrurus catenatus* (Figure 4). It is found in the heavily timbered areas that have been described, but more frequently across the southern part of the state. It has been reported in the southwest counties of Fremont, Mills and Adams. Because of this widespread distribution, it is certain, however, that it must have been present in many other counties as well, but its occurrence there simply hasn't been recorded.

The prairie rattlesnake, *Crotalus viridis,* has been reported in two counties around Sioux City, and the copperhead, *Agkistrodon mokasen,* has been found in the three counties in the extreme southeast tip of the state.

No figures are available to show which type of snake has produced the most bites in Iowa, and for that matter, no figures have been compiled on the number of bites from any source in Iowa. It has been supposed, however, that a great number of snakebites occur in animals, par-



Figure 2. Mortality due to snakebite has been indicated for those parts of the world about which information is available. The numbers are highest in southeast Asia. From Minton, S. A.: Snakebite. SCIENTIFIC AMERICAN, 196:-114-118, (Jan.) 1957.

ticularly dogs. As would be expected, small animals such as dogs tend to sustain more bites about the head and trunk than do larger beasts, in which most bites occur in the legs.

There is a great deal of variation in the amounts of poison in the venom glands of snakes and in the concentration of poison in a given amount of venom. Some of the factors that influence the severity of snakebite symptoms are these: how many fangs have penetrated, how deep the penetrations have been, and the size of the person who has been bitten. Although snake venom is antigenic and can produce immunity in dogs, it is only temporarily so. Human beings who have been bitten a number of times demonstrate no clinical or laboratory evidence of permanent immunity.

There are several different types of snake venom. The two most common toxins are the neurotoxic venoms seen mostly in the cobra and coral families of snakes, and the hemolysins seen to a great extent in pit vipers. In addition, all venom contains hyaluronidase, which is responsible for the great spreading ability of the venom. There are varying amounts of proteolysin and cytolysin which affect the cells at the site of the bite, producing local swelling and possibly necrosis.

Symptoms. A person who has been bitten usually shows swelling of the bitten part. Of the snakes present in Iowa, the bites can involve one, two, or occasionally three or four wound punctures. The surrounding area is edematous and erythematous. The site of the bite is extremely painful and sensitive when palpated. The swelling is progressive, and usually extends up the extremity. It is shortly accompanied by systemic symptoms such as excessive thirst, weakness, rapid pulse and other signs of impending shock. There may be nausea and vomiting, and diarrhea. If the neurotoxic effects predominate, there may



Figure 4. Eastern Massasauga (Sistrurus catenatus).

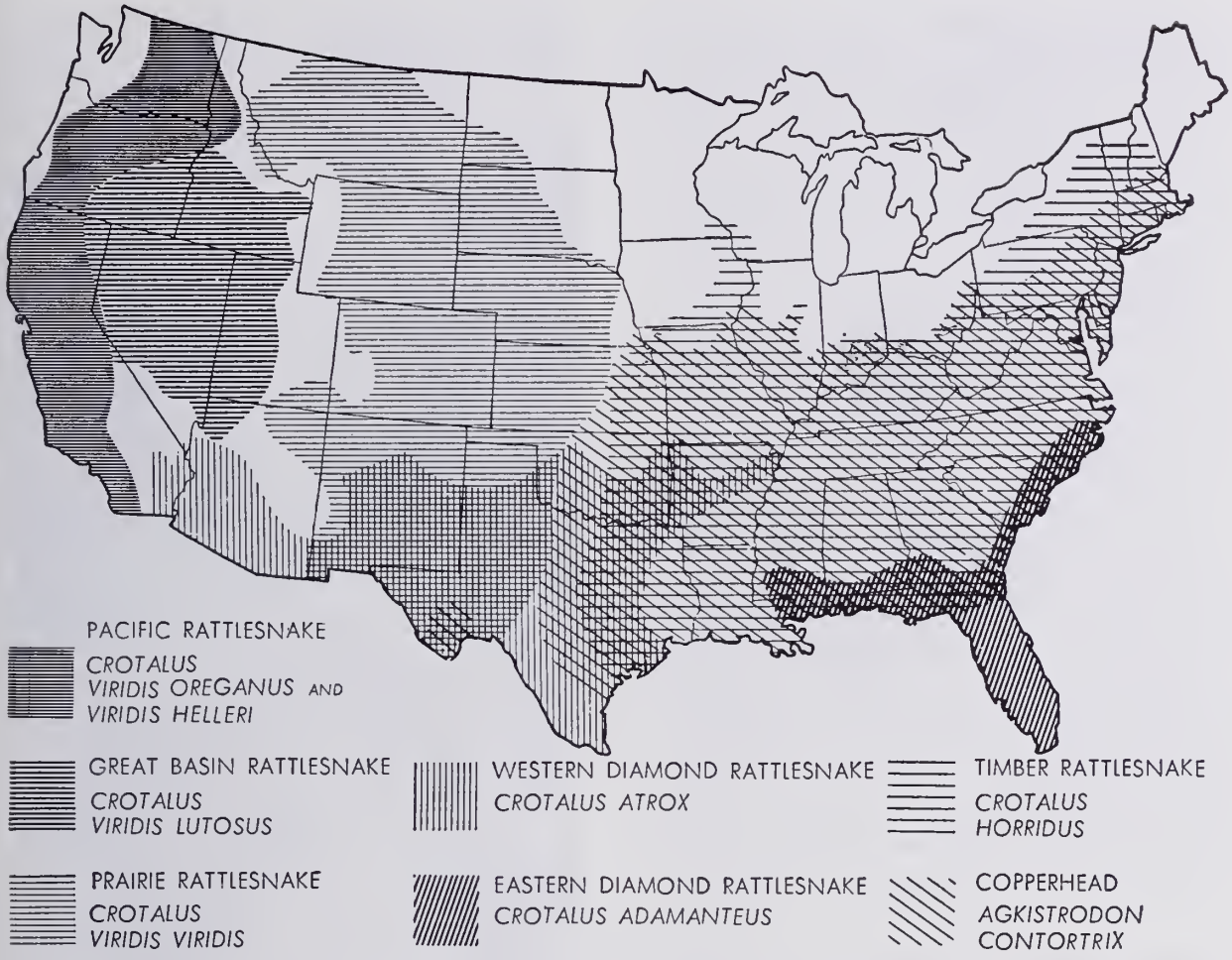


Figure 3. Distributions of six rattlesnake species and copperheads in the United States. From Minton, S. A.: Snakebite. SCIENTIFIC AMERICAN, 196:114-118, (Jan.) 1957.

be incoordination, unsteady gait, motor or respiratory paralysis, and muscular spasm.

Treatment. The treatment consists of "the three A's": antivenin, antitoxin, and antibiotics. Antivenin is a shotgun preparation suitable for treatment of pit viper bites of both North and South America. It consists of hyperimmune horse serum, and thus, of course, one must observe the precautions that are usual in the use of horse serum. It is supplied in a combination package containing a single-dose vial, a syringe and a needle, and a vial of horse serum for skin testing. Treatment consists of the injection of from one to five syringes intramuscularly, subcutaneously or intravenously, depending upon the severity of symptoms, the length of time since the bite was inflicted, the size of the snake and the size of the patient. If treatment is being administered within two hours, one should inject a small quantity of serum around the wound (unless the wound is on a digit) and administer the rest of the dose higher on the bitten limb. Additional doses are recommended every one-half to two hours as the increase of symptoms necessitates. Because of the breakdown of red cells and blood vessels, it is suggested that blood typing for transfusion be done at once. The alteration of the blood pattern can make accurate cross-matching completely impossible if the typing is postponed.

Snakebite can result in clinical tetanus, and for this reason the usual antitetanus procedure should be done. It is also possible for the fangs to carry bacteria into the deeper tissues. This, combined with a great amount of tissue destruction, may result in a fairly extensive infection. Thus, antibiotics should also be given.

First-aid measures include the use of a tourniquet, local incision and suction. The use of a tourniquet alone increases the survival time, but doesn't prevent death. Of course the tourniquet should be placed between the site of the wound and the trunk. It should be advanced as the swelling advances, to keep ahead of the swelling. As the venom is spread through the lymphatic ves-

sels and the tissue spaces, the tourniquet should be applied only tightly enough to occlude the superficial lymphatic and venous circulation, and should be released for two or three minutes every quarter hour. It should be completely removed when swelling reaches the trunk.

Because of the fact that venom is usually deposited in the subcutaneous tissue—rarely as deep as the muscles—incisions a quarter-inch long and a quarter-inch deep should be made over the fang punctures and over the surrounding edematous tissues. As many as 10 or 15 incisions may be necessary. Suction cups or oral suction may be applied over the incision continuously for about the first two hours of treatment, and if necessary, the cups may be maintained for 30 minutes out of every hour for an additional two or three hours. Wide excision, with suction, has been shown to be an effective method of removing pit-viper venom, if a bite can be treated within 60 minutes of its occurrence. This may be an adequate way to treat bites on the trunk, where tourniquets cannot be applied. However, if a bite is seen more than 60 minutes later, this method is of no value because the venom has spread too far.

Shock is invariably a component of severe invenomation. The usual antishock measures are applicable. Calcium gluconate intravenously in a 10 per cent solution is said to counteract the hemolysis of the red cells by the venom. If there is a great deal of local pain, morphine or Demerol may be used, but alcohol tends to accentuate the symptoms and therefore should not be given.

POISONOUS PLANTS

The ingestion of poisonous plants is a less frequent cause of trouble than are household poisons. Yet, when a child has tasted or eaten a plant that he has come across out of doors, it is important to know whether or not the resultant symptoms constitute a serious problem.

Of the plants which are likely to attract children, only a few contain deadly poisons. These are mushrooms, members of the nightshade family, and poison hemlock and water hemlock.

The Nightshade Family. This group includes such plants as jimson weed, deadly nightshade, black nightshade and the woody nightshade or bittersweet. The tobacco, tomato and potato plants also belong to this family, and even these have been the cause of poisonings.

Jimson weed (Figure 5), because it is found almost everywhere, is the most frequent agent in these poisonings. It is a large plant, growing up to five feet tall and having large, heavy leaves and large, white, funnel-shaped flowers of the morning-glory type. It is often found in and around barnyards. The flowers appear from May until September, and the fruit ripens from the last of August until October. The active principle is hyoscyamine, contained in the seeds and thorny seed pods. The symptoms which patients exhibit consist largely of extreme flushing, temperature elevation, dilation of pupils, and dry mouth, throat and skin —phenomena like those that follow the taking of atropine. If the child has eaten a great deal, he may become comatose or experience convulsions.

Other members of the nightshade family produce the same symptoms, but not so frequently.



Figure 5. Jimson weed (Datura stramonium).

The black nightshade (Figure 6) has a grape-like cluster of black berries that prove attractive, as do occasionally the berries of bittersweet (Figure 7). The mortality rate from the nightshade group is not great, but children who have eaten the seeds or berries are extremely uncomfortable for a day or two.

The Hemlocks. This group includes two species that are found in Iowa as well as in many other places from the Atlantic to the Rocky Mountains. In general, the hemlocks are found in relatively inaccessible places such as swamps and waste land, and present less attractive foliage and fruit, and thus as a rule they don't tempt children.

Water hemlock is a perennial plant growing as high as eight feet and found in swamps and moist land. Its stems are large, hollow and purple-spotted. In late summer, there are branching clusters of small white flowers not unlike those of the elderberry plant. The roots consist of tubers radiating from a center attachment to the stem. The root



Figure 6. Black nightshade (Solanum nigrum). These berries are most poisonous before they ripen.



Figure 7. Bittersweet or woody nightshade (Solanum dulcamara). The attractive red berries are poisonous if eaten in quantity.

is responsible for most cases of poisoning, for people who gather wild roots may mistake these tubers for edible roots. The poisonous material is an alkaloid known as cicutoxin.

The poison hemlock is also known as deadly hemlock, poison parsley, stink weed or poison snake weed. It grows extensively in waste land and on roadsides from New England to the Rocky Mountains. It grows from two to seven feet tall, and has large parsley-like leaves. Poisoning results when people mistake the leaves for those of parsley, the roots for parsnips or horseradish, or the seeds for anise. In one recorded instance, an individual developed symptoms after making a whistle from a hollow hemlock stem. This is the plant that the ancient Greeks used in killing condemned prisoners—among them, the philosopher Socrates. The poisonous property is the liquid coniine that is found most abundantly in the leaves at flowering time and in the seeds and roots during the fall season.

The symptoms of poisoning develop quickly. As a rule, the patient becomes extremely weak, collapses and may experience convulsions. Soon, he exhibits tachycardia. There is paralysis of the muscles of respiration, and he dies of anoxia and shock, all within an hour. Again, the best treatment is to empty the patient's stomach by aspiration or by inducing vomiting, the sooner the better. There is no known antidote, and the mortality rates are high.

Mushrooms. Mushroom poisoning is a very broad subject and can be no more than touched upon here. There are many edible mushrooms and many poisonous mushrooms. The differences between the two are sometimes so slight that even a trained botanist or mycologist hesitates to choose between them. A very delicious and common mushroom, one highly prized as a delicacy, is called the morel. It is sometimes confused with another, the Gyromitra, which is poisonous when old (Figure 8).

Two mushrooms, both found occasionally throughout this area, vie with the two hemlock plants for the distinction of being the most poisonous in the plant kingdom. These are the "fly amanita" (Figure 9) and the "deadly amanita," the latter the most poisonous mushroom of all (Figure 10).

The poisonous effects are ascribed to mycoatropine, a substance that acts much like atropine itself. It was originally thought that muscarine was the most toxic of this mushroom's alkaloids, and it was from that substance that it received its Latin name. Because atropine neutralizes the muscarinic effects, it was formerly used as an antidote, but the current therapy consists of gas-



Figure 8. These two mushrooms are frequently mistaken for one another. Gyromitra, above, is poisonous when old. Morel, below, is an excellent-tasting, edible variety.



Figure 9. Amanita muscaria, characterized by a bright red or orange cap, is quite poisonous.

tric lavage, followed by symptomatic therapy. Atropine is still given to neutralize the muscarine, and it apparently doesn't enhance the effect of mycoatropine.

RABIES

Rabies is an acute infectious virus disease propagated primarily in dogs, although all other mammals are susceptible to it. Usually, man is accidentally infected when he is bitten by a rabid animal. After deposition in the tissue, the virus migrates through the nerve trunks to the central nervous system, where it produces an invariably fatal encephalitis.

The disease can affect all mammals, as I have said, including bats. Birds are also susceptible, though less so than are mammals. With the exceptions of Australia, the British Isles and some Scandinavian countries, rabies extends throughout the world. It is enzootic in wild life such as wolves, mongooses, bats, foxes, coyotes, skunks, etc., and because of this wildlife reservoir the actual incidence of the disease in any geographical area is unknown. Between 7,000 and 10,000 cases of rabies in animals are usually reported each year in the United States, but it is certain that the true figure is much higher.

Human Incidence. There are no more than 20 human cases reported annually in the United States, but the number of human exposures runs into the tens of thousands.

Entry of Virus. The virus enters the body from the saliva of an infected animal through a wound or scratch on the skin. Infection through unabraded mucosa also seems possible. The virus may remain arrested in viable form at the site of infection for some time before spreading via nerve trunks to the central nervous system, where it multiplies. It may then spread centrifugally, infecting and possibly multiplying in the salivary glands. The virus cannot invade the body through an intact gastrointestinal tract.

Incubation Period. Rabies has an incubation period ranging usually between 15 days and five months, but it is relatively short in patients who have been bitten on the face or neck. Massive introduction of the virus through extensive bites in other areas also tends to shorten the incubation period. In about 80 per cent of human cases, the incubation period has been from three to 12 weeks.

In taking the history of a patient with encephalitis of unknown etiology, it is important for one to ask his family and other associates about incidents that may have occurred weeks before the onset of the patient's symptoms. Even if a bite cannot be remembered, questions should be asked about the behavior of animals with which the patient has had contact. Often minor and seemingly insignificant contacts with an animal not obviously sick at the time of exposure are forgotten by both the patient and his family. Specific inquiry should be made as to the origin of scar tissue that has been observed on his body in the course of the examination. It is always possible that he has been exposed to rabies.

Clinical Picture. Rabies is basically similar to encephalitis, clinically. The onset of symptoms occurs with a two- to four-day prodromal period of malaise, anorexia, headache and fever. During or shortly afterward, the earliest and most clearly diagnostic sign of rabies appears. It consists of some abnormal sensation at the site of the bite, and it occurs in a great majority of the cases. As the disease progresses, it is almost always accompanied by high body temperatures. Periods of hyperexcitability may alternate with periods of lethargy. Even the thought of drinking water causes intense spasms of pharyngeal muscles, resulting in an intense fear of swallowing water. Hence the name "hydrophobia." A majority of patients die during the excitement phase, usually because of respiratory or cardiac failure.

As the disease progresses, the periods of excitation may give way shortly before death to successions of muscle spasms, to peripheral vascular collapse and to general flaccid paralysis. In some cases, particularly those observed after vampire bat bites, the clinical course of rabies is characterized almost exclusively by the picture of ascending paralysis without excitation or hydrophobia. The diagnosis can be confirmed through the isolation of rabies virus from saliva obtained during the course of the disease, or from brain or salivary-gland tissue obtained at autopsy.

Treatment. Strictly speaking, the term *treatment* cannot be employed in a discussion of rabies, since the disease, once clinically apparent, is invariably fatal. The measures recommended are to be applied immediately after exposure to injury, and prior to the development of any symptoms of the disease.

The wound should be cleansed thoroughly. For years, the classic treatment has been cauterization of the wound with fuming nitric acid. Equally good results are obtained when the wound is thoroughly irrigated with soap solution or with Zephiran. It is of utmost importance that the wound be thoroughly cleansed as soon as possible, preferably within the first two hours after the bite.

If possible, the animal that inflicted the wound should be held in custody. If it was rabid at the time of the biting, it will develop definite and unmistakable signs of disease within a short time, and will probably die within a few days—10 at the most. If the animal dies, its head should be sent to the nearest diagnostic laboratory for examination. If the animal shows symptoms during the period of observation, immunization of the bitten person should be started at once.



Figure 10. Amanita phalloides, the most poisonous mushroom of all.

Passive immunization for rabies by administration of hyperimmune antiserum is recommended as a standard procedure. It is most effective when administered within 72 hours after exposure. The recommended procedures are shown in the accompanying table (Table 1).

No rabies vaccine preparation is at present available which is completely free of nervous tissue, the presence of which may give rise to local allergic reactions or even to those of a general neuroparalytic nature. The incidence of paralysis may be as high as one in every 500 or 600 cases of persons treated with the vaccine, and that is a considerable incidence. Myelin has been implicated as the primary factor causing paralysis, and for that reason a vaccine has recently been developed from duck embryo. This new vaccine

TABLE 1
INDICATIONS FOR SPECIFIC POSTEXPOSURE TREATMENT OF RABIES*

Nature of Exposure	*Condition of Animal*		*Recommended Treatment*
	AT TIME OF EXPOSURE	DURING OBSERVATION PERIOD OF 10 DAYS	
I. No lesions. Indirect contact only	Rabid		None**
II. Licks			
1. Unabraded skin	Rabid		None**
2. Abraded skin and abraded or unabraded mucosa	(A) Healthy	(A) Healthy	None
	(B) Healthy	(B) Clinical signs of rabies or proved rabid	Start vaccine at first signs of rabies in animal
	(C) Signs suggestive of rabies	(C) Healthy	Start vaccine immediately. Stop treatment if animal is normal on 5th day after exposure†
	(D) Rabid, escaped, killed or unknown	(D)	Start vaccine immediately
III. Bites			
1. Simple exposure	(A) Healthy	(A) Healthy	None
	(B) Healthy	(B) Clinical signs of rabies or proved rabid	Start vaccine at first signs of rabies in animal
	(C) Signs suggestive of rabies	(C) Healthy	Start vaccine immediately. Stop treatment if animal is normal on 5th day after exposure†
	(D) Rabid, escaped, killed or unknown; or any bite by wolf, jackal, fox or other wild animal	(D)	Start vaccine immediately
2. Severe exposure (multiple; or face, head or neck bites)	(A) Healthy	(A) Healthy	Hyperimmune serum immediately. No vaccine as long as animal remains normal
	(B) Healthy	(B) Clinical signs of rabies or proved rabid	As in III, 2, (A), but start vaccine at first signs of rabies
	(C) Signs suggestive of rabies	(C) Healthy	Hyperimmune serum immediately, followed by vaccine. Vaccine may be stopped if animal is normal on 5th day after exposure
	(D) Rabid, escaped, killed or unknown. Any bite by wild animal	(D)	Hyperimmune serum immediately, followed by vaccine

Hyperimmune serum to be effective must be given within 72 hours of exposure.
These indications apply well whether or not the biting animal has been previously vaccinated.
* Koprowski, H.: Symposium on unusual infections of childhood: rabies. PEDIAT. CLIN. NORTH AMERICA, 2:55-63, (Feb.) 1955.
** Start vaccine immediately in young children and older patients when a reliable history cannot be obtained.
† Alternative treatment would be to give hyperimmune serum and not start vaccine as long as animal remained normal.

contains little myelin, if any, and it is thought to produce significantly less neuroparalysis.

Although most persons undergoing antirabies treatment are protected, failures do occur, especially when the bites have been severe and/or have been sustained above the shoulders.

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State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 50-YEAR-OLD garage operator was admitted to the hospital with the chief complaint that he "had run out of gas during the last six weeks." In 1953 he had had a myocardial infarction, and had been treated with bed rest at home for six weeks. Thereafter, he had returned to full work. Six weeks before his admission to this hospital, he had consulted his family doctor because of weakness, tiredness and shortness of breath on exertion. He had no chest pain. A protein-bound iodine was 3.5 micrograms per 100 ml. He was started on 2 grains of desiccated thyroid daily. His symptoms progressed. Two weeks before admission, he was started on digitalis therapy.

Physical examination revealed a well-developed, well-nourished, but anxious and nervous white man. The blood pressure was 120/80 mm. Hg, the pulse 96 per minute and the respirations 18 per minute. The patient's skin was cold and clammy, and he was perspiring profusely. The thyroid gland was not palpable. The neck veins were distended. The anteroposterior diameter of the chest was normal, the excursion was good, and the lung fields were resonant. The breath sounds were normal. There were no rales or wheezes. The heart was enlarged, and there were obvious overaccessibility of the right ventricle and slight overaccessibility of the left ventricle. The aortic second sound was louder than the pulmonary second sound, but neither was abnormally loud. There was a grade II blowing systolic murmur at the apex which radiated out to the axilla. The heart tones were quiet. The liver was palpable two fingerbreadths below the costal margin, and was slightly tender. The prostate gland was slightly enlarged, but of normal consistency. The ankles were not edematous.

The hemoglobin was 15 Gm./100 ml.; the white blood cell count was 12,150/cu. mm.; the differential count showed 79 per cent segmented polymorphonuclear leukocytes, 19 per cent lymphocytes and 2 per cent monocytes; and the sedimentation rate was 22 mm./hr. Urinalysis revealed a specific gravity of 1.006, and 1+ albumin. The urine was negative for sugar and blood. Microscopic examination revealed from one to four coarsely granular casts and two white blood cells per high-power field. A blood culture was sterile. The patient's vital capacity was 3.4 liters—an estimated 93 per cent of normal. The arm-to-tongue circulation time was 10 seconds. Serum cholesterol was 20 mg. per cent. An I^{131}-uptake was 3 per cent at four hours and 5 per cent at 24 hours.

X-ray films of the chest showed cardiac enlargement (Danzer ratio .57), and the vascular pattern was definitely accentuated. Fluoroscopic examination of the heart showed considerable enlargement of all chambers, including the right atrium. The fluoroscopist thought that there was probably more right than left ventricular enlargement. No areas of calcification were seen. An electrocardiogram showed atrial fibrillation, frequent ventricular premature beats, incomplete right bundle branch block, probable left ventricular hypertrophy, possible old antero-septal myocardial infarction, and digitalis effect. A blood preparation was negative for lupus erythematosus.

The clinical diagnosis was cardiac failure. The patient was given an 800 mg. sodium diet. Digitoxin, 0.1 mg. daily, was prescribed, and 2 ml. of Mercuhydrin was given intramuscularly. Thyroid medication was stopped.

For the first several days, the patient's course was characterized by low-grade fever, tachycardia,



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DECLOMYCIN Demethylchlortetracycline attains—usually within two hours—blood levels more than adequate to suppress susceptible pathogens—on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. The average, effective, adult daily dose of other tetracyclines is 1 Gm. With DECLOMYCIN, it is only 600 mg.

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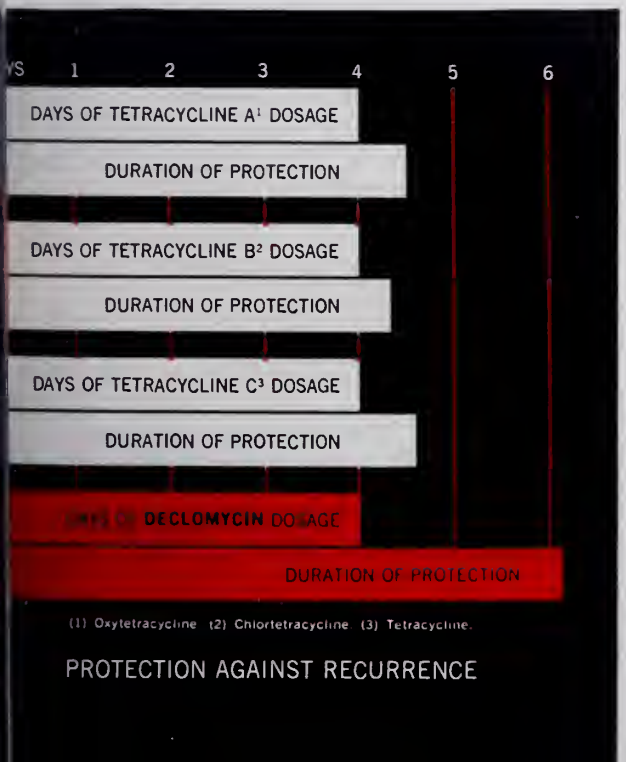


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CAPSULES, 150 mg., bottles of 16 and 100. **Dosage:** Average infections—1 capsule four times daily. Severe infections—Initial dose of 2 capsules, then 1 capsule every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into 4 doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day—divided into 4 doses.

PRECAUTIONS—As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under constant observation.

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extreme apprehension, some nausea and vomiting, profuse sweating and distant heart tones. An electrocardiogram on the fifth hospital day showed that the premature beats were less frequent and that the ST segment changes were less prominent. On the sixth hospital day, the patient complained of coldness and sweating. The blood pressure was 110 80 mm. Hg, and the pulse was 112 per minute. On the seventh hospital day, the patient became disoriented and lethargic, had tachypnea, and had a blood pressure of 80/60 mm. Hg. The pulse was 108 per minute. The liver was palpated four fingerbreadths below the right costal margin and was slightly tender. The heart sounds were muffled and irregular. The possibility of fluid in the pericardium was considered, and a pericardial tap was done, but no fiuid was obtained. The patient died that afternoon.

SUMMARY OF CLINICAL DISCUSSION

Dr. George N. Bedell, Internal Medicine: The students on C-31 have discussed this case, and Mr. Milstein will give their impression.

Stanley Milstein, junior medical ward clerk: We consider the following to be the most likely diagnoses: (1) Myocarditis on the basis of either chronic carbon monoxide poisoning or rheumatic fever of the acute interstitial, idiopathic type; (2) Subacute bacterial endocarditis; and (3) Collagen vascular disease such as disseminated lupus erythematosus.

We consider the following less likely, but still possible: (4) A second myocardial infarction; (5) Hypothyroidism with subsequent overdosage with thyroid substance; and (6) Pericarditis.

We feel that the patient's basic difficulty was chronic carbon monoxide poisoning which caused the myocarditis and resulted in congestive heart failure and death.

Dr. Bedell: The students seem to have relied heavily on the patient's occupational history.

Dr. Walter M. Kirkendall, Internal Medicine: I think that at least one of the students must have been a garage mechanic at some time during his life, for they have considered a disease entity to which I haven't given serious attention.

I should like to go through the protocol hurriedly, and bring out a few things that I think are interesting and perhaps significant. Then, I should like to talk about the possibilities which I considered in arriving at my diagnosis.

This man apparently had a myocardial infarction at some time in the last five or six years, which was treated at home. He returned to work, and thereafter was apparently in reasonably good health. His current difficulty began six weeks before he entered this hospital and was characterized by weakness, fatigue and shortness of breath on exertion, and—as was pointed out in the protocol—had no chest pain. His protein-bound iodine was in the lower range of normal, but he didn't improve when exogenous thyroid was supplied. Digitalis was started before he came to this hospital. He was apprehensive. His blood pressure was normal, but this finding does not necessarily imply that he usually had a normal blood pressure. The patient might have had an acute lowering of his systemic pressure from previously hypertensive levels from a variety of causes. His pulse rate was 96 per minute, and his pulse pressure was not wide. It seemed quite likely that he was having considerable peripheral vasoconstriction at this time to compensate for a lowered cardiac output. This notion is supported by his cold and clammy skin and profuse perspiration. Obviously, he could have been in shock. It seems most likely that his difficulty was cardiac in origin.

The lungs were remarkably normal. The heart was enlarged, and the patient had an irregular rhythm. There were also a rather pronounced overaccessibility of the right ventricle, and some—though less—overaccessibility of the left ventricle. There was a grade II blowing systolic murmur at the apex, which radiated out to the left axilla. The heart tones were quiet. There was evidence of congestive failure because the neck veins were distended, and the liver was tender and palpable two fingerbreadths below the right costal margin. There was no gross edema, however.

Of the laboratory values, the hemoglobin is of some help because it was in the normal range. There was a mild leukocytosis, mainly of the polymorphonuclear cells. Urinalysis revealed 1+ protein, a specific gravity of 1.006, and a few coarsely granular casts and white blood cells in the urinary sediment. These findings are compatible with the diagnosis of congestive heart failure. A blood culture was sterile. Vital capacity was within normal limits, and the circulation time was 10 seconds—distinctly on the short side for a patient in congestive heart failure. Serum cholesterol was within normal limits, and the uptake of radioiodine was depressed, as one would expect after this much exogenous thyroid extract. X-ray films of the chest showed cardiac enlargement and an accentuated pulmonary vascular pattern.

Dr. Carl L. Gillies, Radiology: We have the posteroanterior, lateral and both obliques. The cardiac shadow is enlarged, and the vascular markings are accentuated. The heart is generally enlarged, with no particular enlargement of any chamber. There is no fluid in the pleural space.

Dr. Elmer L. DeGowin, Internal Medicine: Would you say it is possible that there was a myocardial aneurysm in the right ventricle?

Dr. Gillies: I should say that it was possible, but I don't see it.

Dr. Kirkendall: The electrocardiogram shows most of the things that third-year medical residents like to diagnose, but I am not sure that under the circumstances the report is extremely helpful. If we had the tracings, perhaps we could tell some-

thing more, particularly if we had the serial tracings. We might get an idea of whether something was happening in the pulmonary circulation. The tracing, as described here, confirms our impression that the patient had extensive myocardial disease. I assume we don't have those electrocardiograms.

Dr. Lewis E. January, Internal Medicine: Judging from the number of abnormalities listed in the interpretation, this patient revealed more than most do through this test. Atrial fibrillation, with a ventricular rate of 110 per minute, is evident on the first tracing. Digitalis effect does not appear to have been extreme, although toxic effects are suggested because of multi-focal ventricular ectopic beats and a short run of bigeminal rhythm. There is, indeed, some support for old myocardial infarction, which is said to have occurred in 1953, and the electrocardiograms suggest that it was located in the anteroseptal area of the left ventricle. The incomplete right bundle branch block is obvious. The evidence for left ventricular hypertrophy is minimal, but there is a sufficient change to suggest that the pathologist will find an increase of the left ventricular mass. There is nothing in the second electrocardiogram made four days later to indicate any acute process in the heart. Certainly, no serial changes had occurred that would suggest acute myocardial infarction or pericarditis. There are no changes in either tracing to suggest an aneurysm of the left ventricle.

Dr. Kirkendall: I was particularly interested in whether the ST segments on the right side of the heart changed very much, for the description in the protocol suggests that the patient initially had evidence of right ventricular strain pattern, or at least right ventricular changes which are sometimes seen after pulmonary emboli. There were no significant ST-segment changes in the second tracing, and hence the possibility of acute right ventricular overload becomes less likely.

It is of interest that the clinical diagnosis was cardiac failure. The patient was started on medications and diet, which ordinarily are effective in this syndrome. The thyroid medication was stopped. In spite of these changes, he did not do well. On the sixth hospital day, the patient complained of coldness and sweating. The blood pressure had fallen a bit at that time, and the pulse rate was then 112 beats per minute. On the seventh hospital day, the patient became disoriented and lethargic, and his blood pressure went down. A pericardial tap was done. The patient died that afternoon. I assume that nothing happened at the time of the tap, since his health was declining long before he was tapped.

My approach has been to explain, in terms of a specific disease, the altered dynamics as reported in the protocol. This patient had overaccessibility of the right ventricle, and probably enlargement of that chamber. We have reason to believe also that he had accentuated pulmonary vascular markings. Therefore, he must have had inadequate vascular channels, at least in the pulmonary capillary bed. He could have had obstruction in the pulmonary veins, or on the left side of the heart. These positive findings also could have been caused by increased flow through the right side of the heart. Since there was an increase in venous pressure and an enlarged liver, we know that there was some degree of right-sided heart failure, but not a great deal. We know, also, that the outflow from his left ventricle was inadequate for his demands, and that in this respect he had either an absolute or a relative decrease in cardiac output. Because of his previous history, the tendency is to place the blame for this lowered cardiac output on the heart itself, and more specifically on the myocardium. There is no evidence that the patient had obstruction to the outflow tract into the aorta. We know little about his mitral valve area, and he could have had mitral stenosis, the murmur of which was not audible. However, we have no evidence of secondary signs of mitral stenosis, and consequently I think such a diagnosis is unlikely. He might also have had a tumor above the mitral valve, obstructing the flow of blood through it. The cardinal sign of a ball-valve neoplasm in the atrium—episodic faintness related to position—was not mentioned.

One of the complications of myocardial infarction is perforation of the interventricular septum. If this had occurred, it is possible that, with the increase in right-sided pressure, not much of a murmur would have been present. The murmur might also be absent at times with a varying flow of blood from the left ventricle to the right. Under these circumstances, cardiac output on the right side of the heart could have been greatly increased, and the events that we observed could be explained.

A huge outpouching of the ventricular septum, with impingement on the right ventricular cavity, might have caused many of the signs of right ventricular failure. This outpouching, called Bernheim's syndrome, is probably the figment of a vivid imagination rather than a frequently observed clinical syndrome explaining isolated right ventricular failure. If it does occur, it must be seen only in patients who have a greatly thickened left ventricle from aortic stenosis or long-standing hypertension. It is extremely unlikely that Bernheim's syndrome would explain the clinical situation in the present case.

Since this patient could have had obstruction in the pulmonary capillary bed, or on the side of the pulmonary circuit to the left ventricle, weakening in the walls of the heart, or increased flow to explain the physical findings, I have gone through these possibilities in the following fashion.

First, cor *pulmonale:* We have no evidence for

the clinical variety, and the clinical history is unusual for this sort of difficulty. Cor pulmonale secondary to pulmonary disease or pulmonary vascular disease is a distinct possibility, and may explain the terminal events in this man's history. It is possible that he had small emboli lodged in his lungs, either from his heart or perhaps elsewhere in his venous circulation, and this could have duplicated the clinical picture seen. Right-sided subacute bacterial endocarditis might also supply thrombi for the pulmonary circuit and still allow the systemic blood to be sterile. We have very little evidence to support subacute bacterial endocarditis, and there were no known cardiac lesions on which such an infection might have located. On the basis of this patient's history, however, I think it is quite likely that he had pulmonary emboli, and I believe that these may have been a factor in his death. I do not believe he had cor pulmonale of the primary type.

Pericarditis, myocarditis and *endocarditis* have passed through my mind as possible explanations for this man's trouble. Pericarditis did not attract me, even though so-called acute benign pericarditis may be chronic and lethal. This patient had no pain, friction rub or any other of the usual clinical accompaniments of pericarditis, and therefore I think this diagnosis unlikely. Other types of pericarditis, such as those due to tumor or chronic infection, also seem improbable. The heart was easily palpable through the chest wall.

Myocarditis is an enticing diagnosis. The patient undoubtedly had some form of myocarditis, and this is my primary diagnosis. The variety is open to considerable speculation. Fiedler's myocarditis is a non-specific type, and cannot be diagnosed in the presence of coronary artery disease, hypertension or the other known causes of myocarditis. If one makes the clinical diagnosis under these circumstances, he can be almost certain of being wrong. Coronary artery disease might be severe enough to cause ischemic changes in the myocardium so that the clinical picture might mimic that of myocarditis. Other sorts of myocarditis having specific causes, such as the viral variety, are excellent possibilities, and this viral type of disease has become more frequent of late. We have no positive clinical support, however, for a specific diagnosis of viral myocarditis.

A lesion of the endocardium which might have caused this patient's difficulty is fibroelastosis. The course that he followed is not particularly good for this disease, however. Our evidence doesn't support the view that the patient might have had other disorders that are sometimes associated with endomyocardial fibroelastosis. Of these, carcinoid, eosinophilic leukocytosis or eosinophilic leukemia are examples, and the patient certainly didn't have these. This disease might occur as an isolated entity. Since the findings described might have occurred with endocarditis, I cannot completely exclude this diagnosis.

I haven't mentioned the many other causes of myocarditis, or the other causes of disease in the endocardium or epicardium, though I considered them and they might conceivably have caused this patient's difficulty. I shall dismiss them by saying simply that I don't think they are likely possibilities.

I should like to return to the circulation time, which is the clinical observation that probably influenced the students to make the diagnosis of carbon monoxide poisoning with myocarditis. The circulation time is a difficult test to standardize under the usual clinical circumstances. At times, there may be serious misinterpretations. Usually, when this test is misinterpreted, the error is in the direction of a prolonged time, for most commonly the patient does not observe a sharp or clearcut end point. A shortened circulation time is unusual, particularly in cardiac failure, and I think this should be mentioned as an important finding if the test was done well. A common cause of decreased circulation time is high output type of cardiac failure. Thus, anemia, certain types of pulmonary disease, thyrotoxicosis, beri-beri, large peripheral arteriovenous shunts and other disorders may be associated with rapid circulation and signs of congestive heart failure. The anemia may be absolute, in that it is caused by a lack of circulating red blood cells, or it may be due to a reduction in the amount of hemoglobin available for interaction with oxygen. The latter type of anemia is seen with carbon monoxide poisoning, since carbon monoxide has a greater affinity for hemoglobin in the red cells than does oxygen. My one objection to the diagnosis of myocarditis from carbon monoxide poisoning is that I doubt that the carbon monoxide bonding with the hemoglobin would have lasted through the several weeks of this patient's absence from work. I don't believe that this could have been used as an explanation for the short circulation time after the myocarditis had developed, since by that time, I believe, a low-cardiac-output type of failure should have developed.

There is no support for the diagnosis of thyrotoxicosis, and the patient was not getting enough exogenous thyroid to cause this disorder. Likewise, we have no support for diagnosing peripheral arteriovenous shunts, beri-beri or an intracardiac right-to-left shunt. Rarely, if there is a constricting shell about the epicardium, one may find that the central blood volume is constricted enough for the circulation time to be shortened, even in the presence of heart failure. However, in most instances of constrictive pericarditis, this is not observed, and the circulation time is prolonged. Since I don't believe this patient had constrictive pericarditis, I don't think this explanation for the shortened circulation time is applicable. In short, I don't have an adequate explanation for the short circulation time observed in this patient.

I believe that he had progressive myocardial

disease on the basis of coronary artery atheroma, that he eventually developed thrombi in the right ventricular cavity, and that he had dissemination of these thrombi into the pulmonary vascular bed. I believe he died of progressive heart failure from myocardial degeneration and obstruction of the pulmonary circulation by the blood clots.

Dr. Bedell: Dr. Kirkendall's diagnosis is very similar to the clinical diagnosis that was made at the time of the patient's death. The clinical diagnosis was rheumatic heart disease, mitral insufficiency and stenosis, auricular fibrillation, congestive heart failure, multiple pulmonary emboli and myocarditis.

I should like to ask Dr. January a question. In the past, the electrocardiographers frequently made the diagnosis of myocarditis. Would you like to comment on whether the electrocardiogram in this patient was compatible with the diagnosis of myocarditis? Are the EKG changes specific?

Dr. January: Certain of the changes in this patient's electrocardiograms are compatible with a diagnosis of myocarditis. However, the electrocardiographic changes of myocarditis are completely non-specific, since they involve the RS-T segment and the T waves to a large extent. In this particular case one must admit that digitalis, incomplete right bundle branch block, left ventricular hypertrophy and old myocardial infarction also introduced changes in these deflections. Hence, there is nothing here that is necessarily contributory to a clinical suspicion of myocarditis.

Dr. Henry E. Hamilton, Internal Medicine: Could the rapid circulation time have been caused by an excess of thyroxin?

Dr. Bedell: Dr. Kirkendall suggested that this happens in people with thyrotoxicosis, but he didn't think this patient's primary trouble was thyrotoxic heart disease.

Dr. Frederic W. Stamler, Pathology: At necropsy, this patient was found to have a large, dilated heart that weighed slightly over 600 Gm. There was considerable evidence of congestive failure in that there were mild ascites, congestion of the liver and spleen, a small amount of fluid in both thoracic cavities, and chronically congested lungs. There was an old scar in the interventricular septum, a finding that accorded with the patient's history of myocardial infarct. No evidence of a recent infarct was found, and the major coronary vessels were relatively free of disease. Mural thrombi were found in both auricular appendages, but no pulmonary emboli of any gross size were detected, although a few small emboli were seen microscopically. There was a rather sizeable recent infarct in one kidney, which probably was on an embolic basis. There wasn't a great deal of generalized vascular disease, although the lower portion of the aorta was rather badly involved by arteriosclerosis, with a rather extensive arteriosclerotic aneurysm of this portion.

Microscopically, there was a myocarditis that was diffused and not particularly severe in most areas, but did show small foci of rather intense acute inflammatory response. As to the etiology of this process, I think we can say little of a dogmatic nature. This is a type of myocarditis that has been described in viral infections, and there was diffuse pulmonary fibrosis and interstitial pneumonia which could be interpreted as an indication of a viral disease of the lungs. Thus, possibly, this was a viral myocarditis associated with viral pneumonitis, but we have no proof of this.

I should like to show a few photographs of the lesions. The first is a section of the myocardium (Figure 1). In this picture, destruction of several myocardial fibers is shown, with an inflammatory response of a chronic nature, chiefly characterized by lymphocytes and phagocytes. There is, in addition, a rather diffuse increase in fibrous tissue throughout the myocardium. There is the appearance of edema, or accumulation of excess amounts of fluid between the myocardial fibers, which some observers stress as being characteristic of myocardial disease.

The next photograph shows another focus of

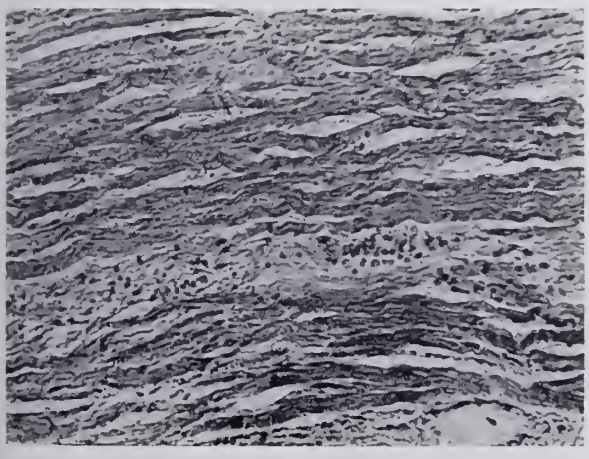


Figure 1. Focal chronic myocarditis with fibrosis.

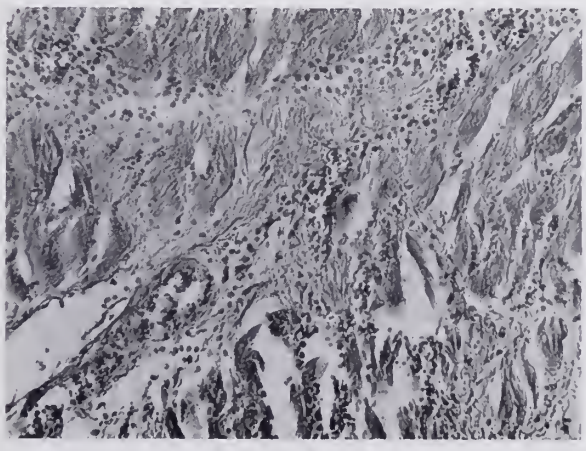


Figure 2. Focal myocarditis of subacute type.

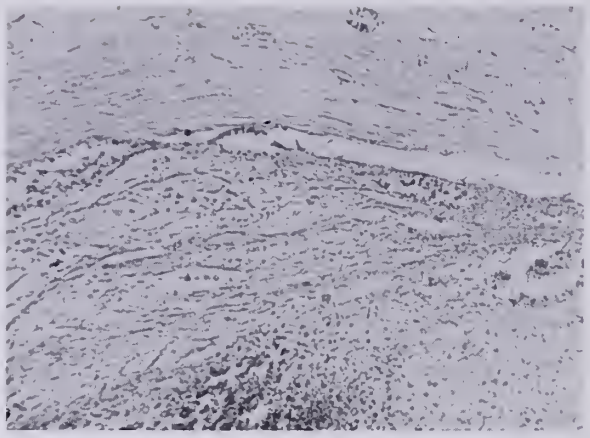


Figure 3. Mural thrombus of recent origin, lower portion of photograph.

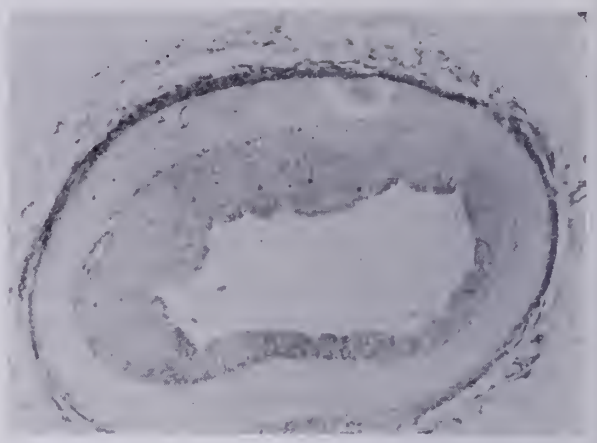


Figure 4. Subintimal fibrosis, of typical small coronary artery.

myocarditis with much more acute inflammation (Figure 2). Most of the cells here are neutrophils. There is, however, some old scarring in this same area. Some fibers here show degenerative changes, but nowhere is there massive destruction of myocardial fibers or massive fibrosis.

The next section is an atrial appendage (Figure 3). This demonstrates a rather fresh thrombus with no observable disease of the atrial muscle. This is one of the smaller coronary vessels, showing that although the arteries are patent, there is considerable subintimal thickening (Figure 4). The lumen of this vessel has perhaps half of its original cross-sectional area, so that there may have been some degree of coronary arterial insufficiency without any more severe type of vascular disease.

The next section shows lung tissue with the fairly uniform appearance of extensive fibrosis and interstitial pneumonitis of a chronic and subacute nature (Figure 5). There is rather noticeable thickening of the arterioles and some disease involving the capillaries. Thus, the supposition of increased resistance to blood flow at this level is very well supported by the anatomical findings. Most of the vessels of small caliber are quite noticeably thickened. The interpretation of the pulmonary lesions is open to question. We could interpret it as primarily a pneumonitis of infective type, perhaps viral, but some of the findings here are more suggestive of the changes associated with chronic left ventricular failure, particularly the thickening of the vessels.

The final section shows congestion of the liver (Figure 6). There is very extensive degeneration and hemorrhage in the central lobular zones, with preservation of peripheral tissue. This change is often associated with congestive cardiac failure, but the extent of the process shown here does not indicate failure of long duration. It could develop within a period of a week or so. There were incidental findings, including several polyps of the colon.

We have, then, a myocarditis of unknown etiology, with evidence that this patient died in congestive cardiac failure, probably largely as the result of the myocarditis. The duration of this disease is open to some question. There is not enough fibrosis of the myocardium to be strongly indicative of disease of great duration.

Dr. DeGowin: What were the thicknesses of the two ventricles?

Dr. Stamler: Those dimensions are of interest in view of Dr. Kirkendall's remarks about what might be found. The left ventricular wall was extremely thick—3½ to 4 cm. The right ventricular measurement was 5 mm., which is not abnormal.

Dr. DeGowin: Was the thyroid gland examined?

Dr. Stamler: The thyroid gland was perfectly normal.

Dr. J. Rathe, medical resident: Were the changes in the heart compatible with carbon monoxide poisoning?

Dr. Stamler: I am not familiar with myocarditis as a result of carbon monoxide poisoning. I reviewed several discussions of myocarditis earlier in the day, but overlooked this as one of the possibilities. I am not aware of any specific, or diagnostic, changes one might find as a result of carbon monoxide poisoning.

Dr. Ian Maclean Smith, Internal Medicine: At what season of the year did this patient's illness occur?

Dr. Bedell: In the summer. The patient died on the fourth of July, having been admitted to the hospital a week before that. His illness presumably had started three or four months earlier.

Dr. Smith: What part of the state did he come from, and in what year?

Dr. Bedell: He came from Spencer, Iowa, in 1959.

This is a patient who had myocarditis. Dr. Kirkendall, and the students and doctors who cared for him, all arrived at that diagnosis. I think that the problems presented by patients of this type tend to frustrate the clinician for a number of reasons. The diagnosis is difficult to make on the basis



Figure 5. Chronic pneumonitis. Several thickened arterioles are shown in the upper left quadrant of the photograph.

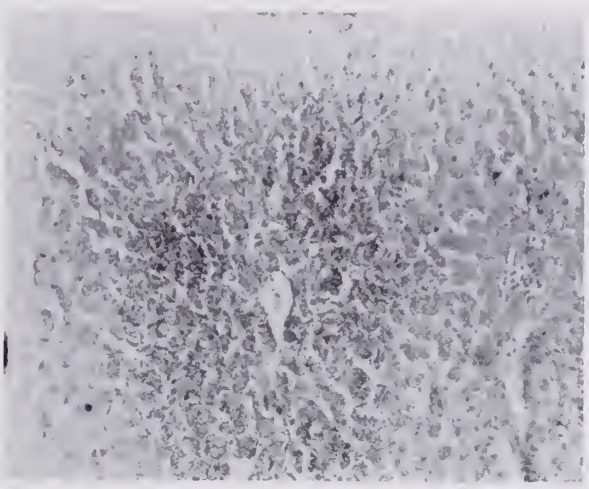


Figure 6. Microphotograph of liver showing centrolobular degeneration and hemorrhage.

of positive findings. Biopsy of the heart is done very infrequently. It is valuable to try to recapture the thoughts of the doctors who took care of this patient. Their first concern was to exclude a valvular type of heart disease that might be remedied by surgery, and then to exclude pericardial effusion, which might be remedied by tapping. All the while, they were treating the patient for cardiac failure. The course helped in establishing the diagnosis.

Dr. Kirkendall: How do you explain the circulation time?

Dr. Bedell: I don't have any explanation for that. I certainly agree with your statement that when an arm-to-tongue circulation time is recorded as 10 seconds, it probably is 10 seconds. I don't believe that a short circulation time is characteristic of myocarditis.

Dr. Hamilton: I think you will see from the protocol that there is some question as to whether the patient might or might not have had thyrotoxicosis in spite of the normal PBI. The initial examination revealed signs consistent with hypermetabolism. The question was whether it was caused by the thyroid that he was getting or whether he might truly have some degree of toxicity.

Dr. Kirkendall: Was a PBI determination done at this hospital?

Dr. Bedell: No. The radioactive iodine uptake was definitely low. The patient was perspiring profusely, was clammy and was extremely apprehensive. This part of the clinical picture was very impressive to everybody, but it is certainly consistent with the diagnosis of myocarditis.

Dr. Smith: Commonly, in the patient with an acute infectious disease, signs and symptoms suggestive of thyrotoxicosis are prominent.

Dr. John A. Gius, Surgery: I should like to ask Dr. Stamler about the narrowing of the coronary vessels that he showed in the slides. He stated that the vessels were reduced about 50 per cent. Now, there is quite a difference between the ratio of reduction in the internal diameter of a vessel and the reduction in the amount of blood flowing through it. I think the point should be emphasized that the amount of liquid passing through tubes varies directly with the radius to the fourth power (r^4) according to Poiseuille's law. Thus, if the reduction amounts to 50 per cent of the original diameter, the flow would be 1/16 or 6.25 per cent of the original flow. I wonder if that is what you meant to imply, rather than the actual narrowing of the vessel lumen.

Dr. Stamler: This 50 per cent figure was a rough estimate of the cross-sectional area, and I didn't mean to imply any precise quantitative measurement. This was a representative vessel, and such a degree of narrowing indicates that there might have been a fairly serious impairment of blood flow in the myocardium of this patient, even though the larger vessels were relatively normal in appearance.

Student: Are there some publications about carbon monoxide as a cause of myocarditis?

Another student: There are several. One was published by Beck and Sutter in the J.A.M.A. in 1938 (vol. 110, p. 1982). There is also a section about it in Freidberg's textbook DISEASES OF THE HEART.

Dr. Bedell: Some believe that carbon monoxide can exert a toxic action on cardiac muscles. Most people attribute the pathologic effects of carbon monoxide to hypoxemia. Carbon monoxide combines with the hemoglobin and ties up red blood cells so that they are not available for oxygenation. The patient may develop tissue hypoxia, and tissue damage secondary to it.

Dr. Robert E. Hodges, Internal Medicine: It sounds to me as though the students have made the closest guess as to what may have happened. I should like to ask Dr. Stamler whether there is any technic whereby the tissues could be checked for carbon monoxide hemoglobin. Will myoglobin

take up carbon monoxide and give a spectral pattern similar to that of carbon monoxide hemoglobin? In other words, could you transilluminate these tissues and pass the light through a spectrograph to detect carbon monoxide myoglobin?

Dr. Stamler: Diagnostic procedures of that sort are possible in fresh or moderately fresh tissue, but not at this stage. In regard to the myocarditis, one could make a tremendously long list of conditions that have been implicated or suspected as possible causes of myocarditis. Most of them produce a very non-specific type of reaction, so that on the basis of the inflammatory reaction and associated changes there is little or no indication of what the etiology of the myocarditis may have been. As far as I know, there is nothing very specific about the changes produced by carbon monoxide.

Dr. Kirkendall: Were any viral studies done?

Dr. Stamler: No.

Dr. Hamilton: I just realized that this was the patient who was on our service last summer, and I can now tell you that the protocol is misleading as regards his occupation. This man came no closer to carbon monoxide than do the others of us who drive automobiles. He *sold* cars, rather than repaired them.

Dr. Bedell: His occupation is listed as "garage operator." I presume that when asked what work he did, he answered in those words.

Dr. Hamilton: In regard to Dr. Smith's question about the relationship between time of year and infection, I can report that it was felt he had a flu-like illness with an onset approximately six weeks prior to his admission here. He was a stoical type of man, but when we went over the story with his wife just before his death, we were able to ascertain to our satisfaction that he had a flu-like illness. Prior to that, he had been doing his usual work. He was known to have chronic auricular fibrillation. We couldn't get the appropriate virus studies at that time.

Dr. Bedell: The etiology of this patient's myocarditis is in doubt. There are many things which can cause myocarditis. At the present time, viruses are considered to be one of the most common causative agents.

SUMMARY OF NECROPSY FINDINGS

The heart was considerably enlarged and greatly dilated, and it displayed extensive myocarditis of a subacute type. Both auricular appendages contained organizing thrombi. There was, in addition, an area of scarring of the ventricular wall consistent with the history of previous myocardial infarction. There was generalized visceral congestion, with particularly notable chronic congestive changes of liver, spleen and lungs, and with ascites and bilateral hydrothoraces as further evidence of congestive cardiac failure. The lungs also showed diffuse subacute interstitial pneumonitis probably in excess of that attributable to chronic congestion.

There was a dissecting aneurysm of the arteriosclerotic type involving the terminal aorta, although other portions of the ventricular system, including the coronary arteries, were not severely diseased. A recent infarct of the right kidney was probably the result of an embolus from the left auricular appendage.

Incidental findings included adenomatous polyps of the colon and an accessory spleen.

Death was attributed to congestive cardiac failure due to myocarditis and associated pulmonary disease. The myocarditis and pneumonitis were of unknown etiology, although the nature of the lesions was compatible with a viral origin.

ANATOMICAL DIAGNOSES

Myocarditis, subacute, etiology undetermined
Pneumonitis, subacute, interstitial, etiology undetermined
Cardiac dilatation, generalized, with myocardial hypertrophy
Congestive heart failure
- (a) ascites
- (b) hydrothorax, right and left
- (c) chronic passive congestion, liver, spleen and lungs
- (d) auricular fibrillation (clinical)

Myocardial infarct, old, interventricular septum
Thrombosis, auricular appendages, bilateral
Infarct, recent, right kidney
Dissecting aneurysm, arteriosclerotic, terminal aorta
Adenomatous polyps, colon
Accessory spleen.

INHALER FOR TREATING MIGRAINE HEADACHES

A device termed "a very useful agent" in treating the symptoms of migraine headaches was described by Dr. Robert E. Ryan, of St. Louis, in the September, 1960, issue of the AMA ARCHIVES OF OTOLARYNGOLOGY. It is a dispenser known as the Medihaler-Ergotamine that delivers measured doses of ergotamine tartrate in the form of an aerosol.

Dr. Ryan said 44 of 60 patients obtained complete or partial relief through its use, and he expressed the belief that some of the failures probably had been caused by improper use of the gadget. The Medihaler is small enough to be carried in a pocket or a purse, he said, and thus can be kept at hand for use whenever an attack begins. The value of prompt administration of the drug, he added, is well recognized.

The effectiveness and speed of relief are comparable to that obtained by injection, according to Dr. Ryan, and a further advantage is the smaller dosage required for administration by the nasal route.



MEDICAL RESEARCH IN THE UNITED STATES

In this, the political year of 1960, there is a great hue and cry about government intervention in caring for the aged. Doctors are becoming greatly exercised about the possibility of loss of autonomy through government strangulation. The government, meanwhile, is quietly encroaching upon medical research and education, a process which the practicing physician is not aware of, or, if aware, is apathetical about.

In an article that appears in this issue of the JOURNAL, Dr. Austin Smith warns of the stultifying effect which this encroachment will have on the pharmaceutical industry. It will also have a seriously adverse influence upon our medical schools.

Modern medical schools began to be interested in research during the two decades on either side of the year 1900. In the ensuing years, the Flexner Report (1911) and World War I shocked the country into recognizing that medical advancement was sadly delinquent. A few great foundations and a number of wealthy individuals responded to these challenges by contributing large sums of money for medical research in the '20's. Growth, however, was stunted during the depression years. Following the '30's, endowments for medical research expanded progressively and the great foundations were joined by a number of state governments as well as the federal government and an enlightened pharmaceutical industry.

The advent of World War II gave a tremendous impetus to medical research and also greatly increased government expenditures in this field. Subsequent to World War II, the American people became research conscious and began to demand more programs to alleviate human suffering. At that time, a large number of voluntary health agencies came into being also, as foci of public interests and aspirations, and the public began to be canvassed periodically for funds to support research in various diseases. At the present time, "about half of the money in support of medical research is derived from the appropriation of tax dollars by the federal government, about 30 per cent is derived from industry, and the remainder from philanthropy, endowments, state government, and other non-federal resources. Although all sources of funds have increased their contributions during this growth process, the greatest proportionate increases have been on the part of the federal government and industry."* The Public Health Service, primarily through the National Institutes of Health, is by far the largest of these agencies in terms of dollar investment. "Other agencies of the federal government involved are the National Science Foundation, the Atomic Energy Commission, the Department of Defense, the Veterans Administration, and—looking ahead—the National Aeronautics and Space Agency."*

The fundamental principles of our national policy in regard to medical research are that the programs of "the federal government complement but do not supplant private activity; and second, that the federal research support should be available from several agencies instead of being centralized in one."* At the present time, almost half of all research in our medical schools is partially or totally dependent upon these outside funds. "Without such funds, the present dimensions of university research would be substantially diminished and, in some instances, the very existence of the entire institution would be threatened."*

The implication from all of this support is that the federal government is now beginning to feel that the universities are dependent upon it for support of research projects. As the very existence of the institution might be jeopardized by withdrawal of the funds from medical research projects, the federal government must now begin to balance the grants for research projects with some grants for the educational process. Thus, gradually, under our noses, the federal government is becoming evermore deeply interested in the medical schools, and there can be no doubt that in forthcoming years, the medical schools will be more and more dependent for their very existence on federal funds.

To date the federal government has not been unduly restrictive as to the activities of the institution except that it does suggest general areas in which medical research should be carried out. There can also be no doubt that our situation in America remains the best of any nation at present carrying out medical research. The process of increasing diffusion of government into all phases of our daily lives seems to be inevitable. Let us hope that those who are doling out the funds for medical research will continue to allow as much individual freedom as possible in this field, for without individual freedom and initiative, research and education certainly will suffer in scope and imagination.

* Significant Trends in Medical Research, Ciba Foundation Tenth Anniversary Symposium, Little, Brown & Co., Boston, 1959.

ON AUGMENTING THE SUPPLY OF NURSES

There are more nurses in this country now than ever before, but the supply is still inadequate to meet present needs, according to the July issue of PATTERNS OF DISEASE, a monthly bulletin issued by Parke, Davis & Company to the medical profession.

Since 1900 there has been a larger gain in the numbers of nurses than in the numbers of any other occupational group engaged in providing health services. During the period from 1900 to 1957, the ratio of nurses to doctors increased almost 200-fold, from one nurse per 100 physicians to 197 nurses for every 100 doctors. In the same length of time, the ratio of dentists to doctors increased by slightly more than half—from 24 to 37 dentists per 100 physicians—and of pharmacists and other members of the health team slightly more than three-fold, from 35 to 114 per 100 physicians.

Nevertheless, still more professional nurses are needed. Positions remain unfilled, wards are closed for lack of nurses, and many counties lack even one public health nurse. In 1958, for instance, about 11 per cent of full-time nursing positions in hospitals were vacant, and in some particular institutions the situation was even more critical.

Also, there is a major need for more top-level nursing personnel—nursing supervisors, nursing instructors, etc. It is estimated, PATTERNS reports, that the country will need 5,200 nurses newly graduated with master's degrees each year, beginning in 1965, but in the academic year 1957-1958 only 997 master's candidates in nursing received their diplomas.

Nursing attracts many students, but there is a high casualty rate among them. "Every year about one in 25 girls of college age is attracted to nursing as a profession," the publication says. "However, in 1956, for example, about one in three failed to complete her training." In addition, almost five per cent of active nurses leave the work force annually.

Although marriage is often given as a reason for resignation, some 60 per cent of active nurses are married. Thus, it seems that many have returned to service after spending a few years as housewives and mothers—perhaps after their children have reached school age and no longer require their full-time attention.

A thought-provoking article in the September issue of HARPER'S suggests that girls should be recruited, perhaps by compulsion, into one or another of the essential service occupations, even though their immediate objective is to marry and become homemakers.* The author's proposal that girls might be drafted for training as nurses, nurse's aides, laboratory technicians, teachers or social workers, much as young men are drafted for military service, almost certainly wouldn't work, even if legislation to that effect could be forced through Congress. But a gentler approach, with public officials, teachers, physicians, clergymen and parents cooperating in a program of persuasion, might be successful.

After all, nowadays, a great many women whose children have reached adulthood are remaining in their homes, doing a constantly diminishing share of the world's work, simply because they never learned how to do anything other than housework. If such a woman had completed training for or had entered a profession prior to her marriage, she could return to work whenever she wished—perhaps after taking a refresher course—thus easing the strain on her husband's earnings, or supplementing her benefits from his life insurance in case of his death. Perhaps more importantly, she would then be happier for having a feeling of renewed usefulness.

PATTERNS furnishes some figures on the salaries that are being paid to nurses, though perhaps they are less informative than some of the other statistics in the issue. We are told that the average salary of the general-duty nurse in a hospital has increased 85 per cent since 1946, as compared with a 78 per cent increase during the same period in the wages paid to the average of all employed persons. However, since at the start of that span of years the salaries paid to nurses were far below those paid to professional workers of other sorts, they obviously aren't yet as high as they should be. They haven't risen nearly as fast, for example, as have the salaries of public school teachers during the same length of time.

* Sanders, M. K.: Proposition for women. HARPER'S, Vol. 221, No. 1324, pp. 41-48, (Sept.) 1960.

SIX-STATE SHORTAGE OF DENTISTS

A recent Public Health Service publication, "The Dental Profession in the Mid-west," presents a gloomy picture of dental manpower in a group of six states: Iowa, Kansas, Nebraska, Missouri and the Dakotas, according to Gerald Gross's WASHINGTON REPORT ON THE MEDICAL SCIENCES for September 5, 1960. Collectively they are shown to have had, in 1958, about 5,400 private practitioners of dentistry, or 1,000 less than the total in 1940 and 1,500 less than the supply in 1930.

Even in metropolitan areas, dentists' numbers are not keeping pace with population growth. Of the six states studied, North and South Dakota face the greatest deficits. The best way to gain comparatively quick relief, says the report, is for the dental schools in these states to admit larger numbers of students whose homes are in this region and who could be expected to practice there. (USPHS Publication No. 751, 15 cents from Supt. of Documents, Washington 25, D. C.)

SKIN TEST FOR ALL TYPES OF TUMORS

A modified tumor skin test (TST) claimed to have greatly increased sensitivity as a screening procedure for all types of tumors is described in the September, 1960, issue of the JOURNAL OF THE AMERICAN GERIATRICS SOCIETY. The author is Dr. Jack G. Makari, director of research at Muhlenberg Hospital, Plainfield, New Jersey.

Last year, in a preliminary study of 191 cases, he reported that a positive TST reaction was obtained in all cases of early localized carcinoma; 85 per cent of carcinoma with local extension; and 60 per cent of metastasized carcinoma. The test also detected all cases of malignant tumors other than carcinoma, and all but 8 per cent of benign tumors.

The test consisted of a series of four intradermal injections, three of them containing substances (SS) prepared from three types of tumors—carcinoma, fibrosarcoma and lymphoma—combined with serum antibodies of the subject being tested. The fourth was a control injection of serum antibodies without SS. The findings (negative, doubtful or positive) depended upon the degree of erythema resulting from sensitized injections, compared with that resulting from the control injection.

Since then, in an effort to increase the sensitivity of the skin test in cases of metastasized carcinoma, Dr. Makari has added a solution of trypsin to the patient's serum in all four injections, so as to digest the protein in the serum and thus liberate "imprisoned" antibodies.

His current report covers two new series totaling 332 additional cases. In 128 of them the original procedure was followed, and in the remaining 204 subjects the modified TST was performed, using trypsinized serum. With the new method, only 3 per cent of all carcinoma patients showed negative results, compared with 31 per cent in the two previous series. However, the new technic was considerably less accurate in detecting malignant tumors other than carcinoma, and in detecting benign tumors.

Both the modified and the original TST were then tried simultaneously on the same 204 subjects. If there was one positive reaction in the series of eight injections, the result was recorded as positive. Result: the findings were negative in only 3 per cent of the carcinoma patients, and in none of those with other types of malignant or benign tumors.

Excellent results were reported from the use of the new technic in 42 cases that presented difficult diagnostic problems. Skin tests were given these patients immediately after their admission to the hospital, and the results were recorded on their records. At the conclusion of the study, the case records were reviewed, and TST findings correlated with final pathologic diagnoses. In only three (11 per cent) of the 27 patients who proved to have tumors had the result of the TST been negative. Of the 15 patients with non-tumorous diseases, only two (13 per cent) had had positive reactions to the TST. Six of these difficult cases are described in the article.

An interesting result of the recent tests was the positive reaction exhibited by 58 per cent of elderly patients (mean age 61 years) suffering from gastric ulcer. Dr. Makari thinks that this suggests that gastric ulcer in the elderly, although it represents a different clinical manifestation, may be a tumor-related phenomenon.

He concludes, "In healthy younger persons, a positive TST reaction indicates a susceptibility to tumor, whereas in healthy older persons it indicates the presence of either a precancerous lesion or a latent tumor.

"In view of the long latent period, chemoprophylaxis assumes vast importance in the prevention of the disease. With use of the tumor skin tests, early diagnosis and early intervention will improve the treatment of cancer."

SURGERY FOR VARICOSE VEINS

Varicose veins are due to an inherited vascular weakness, and can best be treated by injection therapy with annual check-ups throughout the remainder of the patient's lifetime, according to Dr. H. I. Biegeleisen, of New York City. Reporting on a 28-year study of 200 patients who had had surgery for that condition,* he has declared that operative procedures never provide a permanent solution.

"Surgery activates and spreads varicose vein infections, causing the formation of lymph legs in half the cases," he goes on to say. Of the 200 patients studied, 122 were women and 78 were men. Up to the menopause, about as many men had been operated upon as women, but in the subsequent decade women were more numerous. Thus, Dr. Biegeleisen concluded, "The influence of childbearing on the development of varicose veins is apparently a transitory one and has probably been overestimated." Men were more numerous than women among the patients who had been operated upon after passing their sixtieth birthdays.

Two or more operations had been performed on each of 29 patients. In 189 patients complete redevelopment of the original varicose condition had occurred following surgery, and in many cases it was worse than ever. Prior surgery failed to cure or prevent the formation of capillary blemishes (networks of tiny veins). Forty of the patients had developed leg ulcers. "Significantly, 30 cases were on the same side as the operation for varicose veins. . . . The most important complication was the enormous number of lymph legs following surgery—97 cases."

Dr. Biegeleisen believes that injection treatment

* Biegeleisen, H. I.: End results of surgery for varicose veins. NEW YORK STATE JOURNAL OF MEDICINE, **60**:2386ff., (Aug. 1) 1960.

lost favor primarily because of a failure to recognize the chronicity of the condition. Thus, poor results were unfairly blamed on the method of treatment, rather than upon the patient's persistent tendency to the formation of new varicosities.

Of the 200 patients previously operated upon for varicose veins, 127 received a full course of injection treatments, with satisfactory results.

"The mainstay of the injection method is check-up treatment," the doctor insists. Many of his patients returned only for one or two visits a year, and others learned that they can be controlled through treatments at intervals of as much as one, two, three or even five years. But, he reiterates, "This regimen maintains the cure in all who are faithful."

DEMOCRACY IS NOT A SPECTATOR SPORT!

The men who built this republic were proud to be politicians, because they were rugged individualists who had come to the new world to worship God in their own fashion and to run their own affairs. In their town meetings, every man had his say, and most spoke their minds boldly.

In Greece, the name for a town was *polis,* and those who ran the town, its citizens, were called "politikos." Our forefathers knew they had to be politikos, or politicians, to keep their freedom. They instituted government to secure their inalienable rights to life, liberty and the pursuit of happiness. Government derived its power only from their consent. They proudly gave their time to it, for they wished to govern themselves.

We still have self-government and it still works, but it must have the *active* support of all the citizens. Over the years, our country has grown and prospered, and life is becoming more and more complex. People are no longer able to attend to all their needs themselves. Therefore, we have to specialize. Our professional politicians are specialists too—specialists in making the laws or in administering them. The rest of us are largely content with voting for or against them on election day—and only about 60 per cent do even that much.

The first political obligation of each physician and his family is to register (if the regulations require that step) and to vote. Before he does register and vote, the physician should play an active role in the functioning of a political party.

Most people confuse politics with issues. They do not know or they forget the "mechanics of politics," the mechanics of selecting, nominating and electing citizens to public office. It means that politics and government should be in the mainstream of every adult's life. They are America. Freedom is perhaps the most glorious of all things. The entire complexion of life, liberty and the pursuit of happiness changes abruptly when freedom is lost. Think of Hungary and other such countries! Think of the many places where freedom does not exist!

History has demonstrated that free governments begin to disintegrate when the people tend to depend on the state for everything. Paternalism is just as fatal as dictatorial power.

The best way to preserve freedom is to have millions of Americans taking an active part in government through politics. Responsible people from all walks of life should and must take an interest. Remember that our government can be no better than the men you elect. Good government and freedom are your responsibilities.

The time has come for us to plunge into the cold waters of reality and to take an active part in political campaigns. What we can do as medical men will depend upon what we are doing as *citizens!*

Learn the value of one vote—YOUR OWN!

Democracy is not a spectator sport!

Condensed from an editorial in the NEW YORK STATE JOURNAL OF MEDICINE, 60:2673-2674, (Sept. 1) 1960.

WORTHWHILE "BIRTHDAY CARDS" FROM THE D.A.V.

The Iowa Disabled American Veterans, since last October, have taken over a project which is highly valuable but which the state government's Division of Motor Vehicles abandoned two or three years ago as excessively expensive. It is the mailing of "birthday cards" to automobile drivers whose licenses are to come up for renewal during the ensuing month. These reminders promote highway safety, for if unreminded, many individuals would fail to appear for their vision tests at the prescribed intervals. Under Iowa law, if a driver fails to renew his license prior to its expiration, every second birthday, (1) the State Safety Department can require him to take both a written and a driving test, in addition to the vision examination; (2) he may be subject to a $100 fine; and (3) he may be considered an undesirable automobile insurance risk if he has been involved in a traffc accident since his driver's license lapsed.

The Iowa D.A.V., of course, has undertaken this work as a means of earning money, just as the national D.A.V. organization makes and distributes miniature license plates for car owners to carry on their key rings. Each recipient of a "birthday card" saying that his driver's license will shortly expire is asked to make a voluntary contribution to the support of this public service, and as further *quid pro quo,* 100 gummed labels bearing the addressee's name and mailing address are enclosed.

We think very highly of the project, and hope that physicians and their wives will express their appreciation generously when the D.A.V. sends them its greetings.

AMA CLINICAL MEETING IN WASHINGTON, D. C.

November 28—December 1

The president of the AMA, Dr. E. Vincent Askey, has asked the JOURNAL *to convey the following letter to all physicians, encouraging them to attend the 1960 Clinical Meeting, in Washington, D. C., November 28-December 1.*

I want to welcome all physicians to this meeting and to urge all members of the American Medical Association to take part in the scientific activities, to visit the scientific and industrial exhibits, and to attend the sessions of our House of Delegates.

Considerable time has been spent to develop the finest scientific program possible, which will stress the theme, "New Developments in Old Diseases and Old Developments in New Diseases."

A feature of particular interest to the practicing physician will be the presentation of both sides of a question where differences exist concerning the management of a disease or medical condition. I personally look forward to some interesting debate on many subjects where opinions differ.

Some of the topics to be covered by leading physicians and scientists from across the nation include gynecology, hematology, obstetrics, coronary disease, pathologic nodules, psychiatry, artificial kidneys, orthopedic surgery, ophthalmology, diarrhea, antibiotics and tranquilizers.

The scientific sessions, to be held in the National Guard Armory, will be so arranged that three sections will take place simultaneously in both morning and afternoon. One section will be devoted to presentation of formal papers, one will consist of panel discussions, and the third will be a symposium. Of course, all sections will be followed by question-and-answer periods.

The months of prolonged, detailed planning for these meetings have been directed to one goal: to give you, the doctor, the latest up-to-the-minute scientific information. Our clinical meetings are designed as a sort of postgraduate course in medicine, to provide you with all the major scientific advances under one roof.

A scientific highlight of this meeting will be a series of six one-hour television presentations from Georgetown University Hospital. These shows will feature dermatology, pediatrics, emergency treatment of major injuries, and newer methods in surgical treatment of peptic ulcer, orthopedics and pathology.

Three scientific breakfasts will be held on both Tuesday and Wednesday at the Statler Hotel, highlighting the themes, "To Do or Not To Do," and "Problems of Management" in particular diseases or types of cases.

During the meeting, the House of Delegates, AMA's policy-making body, will meet at the Sheraton Park Hotel. I cordially invite every member of AMA to attend the sessions of the House. Although only delegates are permitted to speak from the floor, any AMA member may express himself on issues in the reference committee meetings, scheduled to meet all day Tuesday, November 29. This is one of the rights of AMA membership, and I hope any of you who wish will take advantage of it.

This participation by doctors from all over America is one of our guarantees that AMA will continue to serve its members best. There is no member who cannot be heard from, or who will be refused an audience. Not only is this a right, but I regard it as a duty of physicians to speak up on matters they think of interest or concern to the AMA and American medicine. Only in this way can we remain alert to changing opinions, new developments and whispering crises.

Another highlight of this meeting will be the election of the General Practitioner of the Year. This is in line with the purpose of the clinical meeting—to provide the family doctor with the newest developments in medicine. Of course, the scientific meeting is also designed to inform specialists and researchers as well as general practitioners.

But whether you are a general practitioner or a specialist, a practicing physician or a research scientist, you cannot afford to miss this outstanding clinical meeting. On behalf of the American Medical Association, I cordially invite and urge you to attend. The success of our meetings is measured solely by how helpful and informative they are for you, the doctor.

E. VINCENT ASKEY, M.D.
President
American Medical Association

SYMPOSIUM ON DIABETES

The Chicago Diabetes Association will conduct its Fourth Annual Symposium on Diabetes at the Offield Auditorium, Passavant Memorial Hospital, 303 East Superior Street, on Friday, November 11, beginning at 9:00 a.m.

The speakers will include Professor W. H. J. Butterfield and Dr. Peter H. Wright, of Guy's Hospital Medical School, London; Dr. Sidney Goldenberg, of St. Louis University; and Drs. Ralph A. Reis, James B. Hurd, Marvin Cornblath, Henry T. Ricketts, Frank W. Newell and Benjamin Spargo of the faculties at Northwestern University and the University of Chicago.

Members of the Academy of General Practice may claim hour-for-hour Category II credit.

Registration is free for members of the Chicago or of the American Diabetes Association, and for medical students and residents. The non-member fee is $25. Inquiries may be addressed to the Association at 620 North Michigan Avenue, Chicago 11.

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

REVIEW OF MEDICAL MICROBIOLOGY, FOURTH EDITION, by *Ernest Jawetz*, Ph.D., M.D., *Joseph L. Melnick*, Ph.D., and *Edward A. Adelberg*, Ph.D. (Los Altos, California, Lange Medical Publications, 1960. $5.00).

HANDBOOK OF MEDICAL TREATMENT, SEVENTH EDITION, ed. by *Milton J. Chatton*, M.D., *Sheldon Margen*, M.D., and *Henry Brainerd*, M.D. (Los Altos, California, Lange Medical Publications, 1960. $3.50).

ACTIVE ALERTED POSTURE, by *W. E. Tucker*, M.B., F.R.C.S. (London, E.&S. Livingstone, Ltd., 1960. $3.00).

CELLULAR ASPECTS OF IMMUNITY, Ciba Foundation Symposium, ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Cecilia M. O'Connor*, B.Sc. (Boston, Little, Brown and Company, 1960. $10.50).

SYNOPSIS OF PATHOLOGY, FIFTH EDITION, by *W. A. D. Anderson*, M.D. (St. Louis, The C. V. Mosby Company, 1960. $9.25).

PRACTICAL CLINICAL MANAGEMENT OF ELECTROLYTE DISORDERS, by *William J. Grace*, M.D. (New York City, Appleton-Century-Crofts, Inc., 1960. $4.95).

CLASSICS OF MEDICINE AND SURGERY, by *C. N. B. Camac*. (New York City, Dover Publications, Inc., 1960. $2.25).

EXPERIMENTS AND OBSERVATIONS ON THE GASTRIC JUICE, by *William Beaumont*, M.D. (New York City, Dover Publications, Inc., 1960. $1.50).

A SOURCE BOOK IN MEDICAL HISTORY, by *Logan Clendenning*, M.D. (New York City, Dover Publications, Inc., 1960. $2.75).

PHYSIOLOGY OF PREGNANCY, ed, by *Ernest W. Page*, M.D., and ENDOMETRIOSIS, ed. by *Charles S. Stevenson*, M.D. (Vol. 3, No. 2 of CLINICAL OBSTETRICS AND GYNECOLOGY. New York City, Paul B. Hoeber, Inc., 1960. $18.00 per year for four issues).

FRENCH'S INDEX OF DIFFERENTIAL DIAGNOSIS, ed. by *Arthur H. Douthwaite*, M.D. (Baltimore, The Williams & Wilkins Company, 1960. $24.00).

BOOK REVIEWS

BIOCHEMISTRY OF HUMAN GENETICS, Ciba Foundation Symposium, ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., B.Ch., and *Cecilia M. O'Connor*, B.Sc. (Boston, Little, Brown and Company, 1960. $9.50).

In keeping with the objective of the Ciba Foundation, viz., promotion of international cooperation in medical and chemical research, this book presents the proceedings of a useful symposium on human biochemical genetics, with a minimum of editing.

The very thought of reading a book about the biochemistry of heredity is likely to encounter a great deal of resistance, since the word *biochemistry* reminds one of a lot of difficult or boring moments in one's school days. And why, one may ask, should we study heredity at all? It's with us, like the weather, and nothing can be done about it. That latter statement, however, is now no more than partly true. The book traces some of the means by which something *can* be done about abnormal hereditary endowments.

An important reason for reading a book about heredity is plain curiosity. Here is an important natural mechanism about which very little is known. Especially after the second World War, this thought became so irritating and humiliating to basic scientists that they decided to pursue some investigations in it, and comparatively swift progress has been achieved. Alas, the field even became fashionable!

But the problem of the biochemistry of heredity also has important practical applications for the medical practitioner as well as interest for the researcher. The book touches upon many of them, for example the problems of hereditary galactosemia (especially since it appears that in this connection we have our first chance to attempt a eugenic type of preventive medicine on the basis of a measurement of a partial enzyme defect), abnormal human hemoglobins and plasma protein variants.

The book is recommended to the members of any medical community who have time for a proper assessment of the more esoteric aspects of this most complex subject. It is not recommended to the casual reader or to anyone who isn't prepared by background and training to evaluate its import properly. With this frame of reference, I can say that it deserves a place on the bookshelves of the medical scientist. —*Robert G. Martinek*, M.D.

EPILEPSY AND THE LAW: A PROPOSAL FOR LEGAL REFORM IN THE LIGHT OF MEDICAL PROGRESS, by *Roscoe L. Barrow* and *Howard D. Fabing*, M.D. (New York City, Paul B. Hoeber, Inc., 1956. $5.50).

The thesis of this work is that modern medical knowledge and treatment of epilepsy justify changes in the laws that place restrictions upon epileptics. These legal limitations (which differ in the various states) concern marriage, sterilization, motor vehicle operation, workmen's compensation and miscellaneous other fields of activity.

In his foreword, Dr. Pearce Bailey properly points out that "for all its scholarship . . . this book is part of the literature of indignation." Cultural prejudices against epilepsy impair public and professional understanding of the condition, so that the disease victim becomes the prey of more than the disease itself. Hence, the authors are indignant that epilepsy laws have lagged so far behind medical progress in controlling epileptic seizures.

It is maintained that through the use of anticonvulsants now available, over 50 per cent of epileptics can attain complete seizure control, and the seizures

can be well controlled in an additional 30 per cent. The conclusion drawn is that epilepsy remains a disabling disease in less than 20 per cent of cases. It is also contended that draft statistics indicate an incidence of epilepsy of 0.5 per cent of the population, although Lennox estimates a 1.0 per cent incidence. This means that over 1,500,000 Americans are subject to seizures, and on the basis of five persons to each family, that about 7,500,000 Americans have had immediate experiences with the disease.

Following a detailed analysis of the laws in various states affecting epileptics, an appendix to this volume includes desirable statutes and recommended provisions for inclusion in them. A lucid exposition of the epileptic's place in society, the legal inequities that restrict him, and proposed legislation more in keeping with modern medical knowledge of epileptic seizure control make this volume a provocative and knowledgeable contribution to the literature.

The book is recommended for those interested in this field.—*John T. Bakody,* M.D.

CURRENT SURGICAL MANAGEMENT II, ed. by *John H. Mulholland,* M.D., *Edwin H. Ellison,* M.D., and *Stanley R. Friesen,* M.D. (Philadelphia, W. B. Saunders Company, 1960. $8.00).

CURRENT SURGICAL MANAGEMENT II should not only be on the bookshelves of all surgeons but also of all internists and general practictioners, or at least the latter sorts of practitioners should have ready access to it.

As we all know, there are many surgical problems that can be approached in more than one way, and this book presents alternative viewpoints on a number of controversial surgical situations.

Some of the more interesting problems discussed are (1) acute renal failure—the use of the artificial kidney; (2) management of arterial insufficiency of the lower extremities; (3) thromboembolism; (4) detection of common-duct stones; and (5) carcinoma of the breast.

This edition, like CURRENT SURGICAL MANAGEMENT I, is not only a very informative volume, but a very well-written one.—*Charles C. Edwards,* M.D.

THORACIC SURGERY BEFORE THE 20TH CENTURY, by *Lew A. Hochberg,* M.D. (New York City, Vantage Press, 1960. $15.00).

Cicero, the dubious idol of high school Latin students, told the story of Jason Phalereus, who suffered from a "tumor" in the area of the breast. The physicians declared it incurable. The philosophic Phalereus resolved to die gloriously in battle, rather than ingloriously in bed, and when the occasion presented itself, he rushed upon an advancing enemy with his breast uncovered and unprotected, making no attempt to avoid his adversary's outthrust sword. The sword pierced his chest, and blood and pus gushed forth, but the wound subsequently healed, and Jason was restored to good health. This story is the legendary beginning of the operation for empyema, and it no doubt will delight all non-surgeons, who have long been skeptical of the finesse of surgical procedures.

Dr. Hochberg has written a history containing several such anecdotes, although most of his material consists, not of legends, but of the written records of doctors through the years. The history is detailed and lengthy, the bibliography alone occupying 84 pages.

Many subjects are covered: chest injuries, empyema, pulmonary tuberculosis, diaphragmatic hernia and others. It is sometimes startling to realize how old our "new" procedures may be.

Like most histories, this book probably will not be read like a good novel, without pause; but it is easy to read a bit at a time, and it is undoubtedly an excellent historical reference volume.

Dr. Edward D. Churchill has written the foreword. For some reason he is angry at "today's 'bright boys' " and implies that they don't measure up to the giants of the past. It is somewhat unfair, and certainly is unnecessary, to exalt the past by mocking the present, and Dr. Hochberg himself seems not to have had that intention.—*D. F. Crowley,* Jr., M.D.

YOUR CHILD'S CARE, by *Harry R. Litchfield,* M.D., and *Leon H. Denbo,* M.D. (New York City, Doubleday & Company, 1960. $3.95).

This is a revised and enlarged edition of a pediatric manual for mothers. The authors present "1001 Questions and Answers" pertaining to the care of infants and children. The book would nicely serve its purpose of providing a mother with a quick and concise answer to a problem, later to be explained more fully by her child's physician.

The subject matter covers the complete range of pediatric questions—growth and development, contagious diseases, rare and unusual conditions, clothing and environment, immunizations and many more. In controversial matters, the authors advise consultation with the physician.—*Marion E. Alberts,* M.D.

DISEASES OF THE NEWBORN, by *Alexander J. Schaffer,* M.D., and *Milton Markowitz,* M.D. (Philadelphia, W. B. Saunders Company, 1960. $20.00).

This is a tremendous book. Unique and well-written, it covers the entire field of newborn infants.

The author first presents the normal newborn, and then in a complete and meticulous fashion discusses the deviations from the normal through the various organ systems. In each instance, he gives fully comprehensive consideration to all aspects of the problem, and supplies excellent case presentations with each discussion. Many fine photographs are included, as well as frequent allusions to the literature and lists of references at the ends of chapters.

Dr. Milton Markowitz assisted the author in a brilliant fashion by presenting the section on neonatal cardiology.

This is a truly valuable and comprehensive volume. I am sure that other physicians who are concerned with the care of newborn infants will find it as interesting and illuminating as I have.—*Marion E. Alberts,* M.D.

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

PKU—A NEW ADVANCE IN PEDIATRICS*

There are many exciting and new developments in the field of nutrition other than problems of excess weight and combatting food misinformation.

The other evening I spoke to a group of dietitians about a newly recognized disease that is treated at the present time solely by restricted diet. This disease is called phenylketonuria. Quite a tongue-twister, yes.

This condition was first recognized in Norway by a biochemist-veterinarian only 25 years ago. In a span of but 25 years, phenylketonuria has been discovered and named, the cause has been found, a diagnostic test has been perfected, treatment has been put into practice, and the condition has been given a nickname. The nickname is PKU, for phenylketonuria.

PKU is discovered in babies only a few weeks or months old. The disease is the result of a "metabolic error," the absence of an enzyme which is necessary in all normal babies to convert or properly metabolize the amino acid phenylalanine. If the enzyme is missing, the phenylalanine accumulates in the body and is excreted as a waste product. Hence the name phenylketonuria.

I feel it is so important for people to know about the disease PKU because if not discovered early in the baby's life, the child does not develop normally and is mentally retarded. But if discovered early, there is a belief that the child can develop normally.

PKU is really rare. There is only one case found in from 25,000 to 40,000 population, or one in 25,000 births. What are some of the clues that can be observed? There is what is called a "mousey" or aromatic odor. There is a lack of pigmentation. Ninety per cent of the babies with PKU are very blond and blue-eyed, with very fair skin. This is particularly outstanding in families which the child's brothers and sisters have dark hair and dark skin. Eczema is frequently found in PKU babies. The infants are often very restless and irritable, and they do not respond to normal stimuli about them.

Diagnosis is relatively simple. How fortunate! A few drops of ferric chloride on a wet diaper form a green ring if PKU is present. Such a "diaper test" is becoming a routine procedure in well-baby clinics in our country. Dr. Hans Zellweger, of University Hospitals, Iowa City, has stressed the likelihood that those concerned with the reality of a mentally retarded child in the family will probably endorse the preventive approach.

When a positive diagnosis has been made, the baby is given no phenylalanine in his diet. This means no milk for three or four days, so as to allow all excess phenylalanine to be excreted. Because this amino acid is absolutely necessary for life and proper growth, however, a small amount of milk is given after the short depletion period. The amount of milk is increased gradually through the succeeding months. To furnish adequate protein, a special milk powder is used. At present, four pharmaceutical houses make this hydrolyzed milk powder. Fluid milk is passed over charcoal to remove the amino acids, and then all amino acids but phenylalanine are put back into the powder.

Fruit is given. Dietitians have worked out special recipes that are low in phenylalanine so that mothers can perk up the baby's unnatural diet as he gets older. The low-phenylalanine diet was worked out in 1954 by a group of physicians in London. Thus it has been in use only six years—not very long. At present, it is believed that the strict, low-phenylalanine diet will be unnecessary by the time the child reaches school age. When the phenylalanine-deficient diet is administered in time, very exciting changes appear in the baby. The skin clears, new hair is darker than the old, there is increased attentiveness and composure, and such mental tests as can be given a tiny infant indicate a raised I.Q.

This is a disease of genetic origin. The only treatment is a phenylalanine-restricted diet. Though really very rare, *PKU must be discovered within a few months following a child's birth if severe mental retardation is to be avoided.* It is important that every pediatrician and every mother know the early symptoms so that a diagnosis can be made and so that the phenylalanine-deficient diet can be started promptly and properly, before mental retardation sets in.

Dr. Charles E. Dent wrote in the May, 1957, issue of THE AMERICAN JOURNAL OF MEDICINE: "It is

* This is a copy of a newspaper column released to the Iowa Daily Press Association through the Nutrition Service of the Iowa State Department of Health, Mary Macomber, director. It is an example of one of the methods used by the State Department of Health to give information on current health topics to the lay public, in language that is both interesting and understandable.

a tribute to modern nutritional science that people can survive on this unnatural diet."

In the 1959-1960 YEAR BOOK OF PEDIATRICS, the editor, Dr. Sydney Gellis said of diseases such as PKU that are caused by the absence of certain enzymes: "This area [of study] gives promise of becoming the most important aspect of preventive pediatrics and holds unlimited possibilities for the physicians of the future."

GUIDE FOR COMMUNITY PSYCHIATRIC CLINICS

A new 300-page volume issued by the New York State Department of Mental Hygiene under the title A GUIDE TO COMMUNITIES IN THE ESTABLISHMENT AND OPERATION OF PSYCHIATRIC CLINICS brings together concrete answers to some of the numerous questions confronting those who set up and maintain community psychiatric clinics. Emphasis is on proved standards, and attention is given to choice of auspices, problems of cost and equipment, selection of personnel, formulation of policy and handling of administrative issues.

The book may be purchased from the Division of Community Services, New York State Department of Mental Hygiene, 240 State Street, Albany.

IOWA POLIOMYELITIS CASES

For Week Ending September 3, 1960

County	*New Cases*	*Total Cases*
Black Hawk	1	2
Des Moines		1
Greene		1
Ida		1
Jefferson		1
Polk		1
Sac		1
Webster		1
Winneshiek		1
Woodbury		1
Worth		1
Total		12
Paralytic		3
Non Paralytic		9
Deaths		1
Total Cases This Week		1
Total Cases Preceding Week		1
Total Cases Same Week Last Year		30
Total Cases to the Same Date Last Year		281

MORBIDITY REPORT FOR MONTH OF AUGUST, 1960

Diseases	*1960 Aug.*	*1960 July*	*1959 Aug.*	*Most Cases Reported From These Counties*
Diphtheria	3	0	0	Pottawattamie
Scarlet fever	59	99	63	Jefferson, Johnson
Typhoid fever	1	3	1	Wapello
Smallpox	0	0	0	
Measles	29	84	61	Dubuque
Whooping cough	5	3	45	Cerro Gordo
Brucellosis	13	13	18	Buena Vista, Scott, Wapello
Chickenpox	28	131	43	Scott
Meningococcic meningitis	1	0	0	Pocahontas
Mumps	325	288	34	Story
Poliomyelitis	4	2	133	Black Hawk, Greene, Jefferson, Sac
Infectious hepatitis	28	20	15	Crawford, Page, Polk, Woodbury
Rabies in animals	21	17	24	Dallas, Louisa, Van Buren
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	35	40	46	For the state
Syphilis	92	120	137	For the state
Gonorrhea	133	150	101	For the state
Histoplasmosis	2	0	0	Bremer, Linn
Food intoxication	0	0	0	
Meningitis (type unspecified)	1	0	1	Boone
Diphtheria carrier	0	2	0	
Aseptic meningitis	0	2	4	
Salmonellosis	5	7	7	Polk
Tetanus	0	0	2	
Chancroid	0	2	1	
Encephalitis (type unspecified)	0	0	1	
H. influenzal meningitis	0	0	1	
Amebiasis	2	0	9	Marion, Montgomery
Shigellosis	2	2	1	Webster, Wright
Influenza	0	0	0	

Iowa Chapter of the American Academy of General Practice

MIRROR, MIRROR ON THE WALL . . .

Physician, stand up and view yourself in a professional mirror! This image is what your patients, the rest of the public and your colleagues see. Are you giving them an unfortunate impression of yourself? Has your personality undergone some disastrous changes as you have grown older and as your busy practice has tired you out?

We doctors practice medicine because we like to give aid, care and advice to those in need. If we didn't, we'd seek less strenuous uses for our scientific educations. The practice of medicine isn't easy, and our lack of spare time is, indeed, one of the reasons why our personalities can undergo change without our becoming aware of it.

As you view yourself in the mirror—and you should quite literally do that, among other things —try to see yourself from your patients' point of view. Think, for a moment, of the sales clerks whom you know. To which of them do you return time after time, carefully avoiding the others? Isn't it the one who greets you with a smile, addresses you by name and seems genuinely delighted to help you?

Your patients and the public in general look upon you, the physician, as more than a pair of hands and a brain expert at the healing arts. They expect you to be the embodiment of kindness and understanding, as well as of medical skill.

Your smile is most important, and your choice of words in questioning and answering should be as pleasant as your smile. Don't drown your patients in highly scientific language, for they're more likely to feel snubbed or frightened, than to be impressed with your wisdom. Honesty, kindness and politeness have no equals. When you feel too exhausted to be cordial, just remember the sales clerk. Perhaps he has been given a rough time by a preceding customer, and his feet may hurt, but he always makes you feel that he is glad to see you.

Perhaps the curricula of our medical schools should include a course entitled "Personality." But it seems that most physicians are endowed with attractive qualities, and need only to remind themselves occasionally of the advantages of being constantly pleasant.

The mirror should show us not only how our patients but how our colleagues see us. None of us like a braggart; neither do we like a "milk toast."

Are you sufficiently helpful in your professional contacts? Without questioning or examining a patient, do you tell him simply "Go see Dr. X"? With this type of referral, your consultant doesn't know whether he is to treat the individual, or just to report his diagnosis to you. Or do you make a careful study and examination of the patient, and then after suggesting to the patient that consultation should be obtained, provide the consultant with all the information you have about the patient, make arrangements for the consultation and arrive at an understanding with the consultant as to whether he is to provide treatment as well as a diagnosis and recommendations?

The other foot must also wear a properly fitting shoe. When you are the consultant, how do you acknowledge referrals? Do you go ahead with treatment before talking with the referring doctor? Do you sometimes disregard the information supplied by the referring physician and even let the patient know that you are doing so? Do you ever suggest or imply that the patient shouldn't return to the referring physician? Do you call the referring physician and make your suggestions directly to him? Do you give him all of the information you have obtained about the patient?

Physician, view yourself in the mirror. What do your patients see? What does the public see? What do your colleagues see? Is your image all that you wish it to be? Stand up and look! Each of us can make improvements in himself.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 23-26, 1961

Veterans Memorial Auditorium

Des Moines

In the Public Interest



Our Legislators Should Carefully

Avoid Creating or Enlarging Umbrellas

The General Assembly of Iowa, like the Congress and like the lawmaking bodies of other states, has had to be constantly alert to the possibility that the bills relating to specific occupations that it is asked to pass aren't mere "umbrellas" designed to shelter certain individuals, and don't contain "sleeper" provisions that can be interpreted as having had that intention. Though the statute providing licensure for watchmakers (Code of Iowa, Ch. 120) may be an exception, Iowa legislators have been generally successful in recognizing and defeating such proposals up to the present time. But the threat persists, for new bills of this sort are dropped into the hopper at each legislative session.

Of course, Iowa has laws relating to a considerable number of vocations in the health field—ones having to do with doctors of medicine, chiropodists, osteopaths, chiropractors, nurses,* dentists, optometrists, pharmacists and wholesale druggists, funeral directors and embalmers, cosmetologists and barbers (Chapters 148-158, inclusive)—and they are quite satisfactory as they now stand.

In saying that we doctors of medicine are content with the vocational statutes in the health field, we don't, of course, mean to imply a belief that they have been entirely successful in regulating the practitioners with which they are concerned. Rather, we think merely that the Iowa laws are as nearly successful as it is possible for laws to be in this area. It is, after all, virtually hopeless for a legislature to attempt setting educational standards in terms of years of schooling, names of courses and hours of credit. It is similarly futile for lawmakers to enumerate, once and for all, the procedures that a particular type of practitioner may undertake and the machines, instruments and methods that he may employ. And every time that a legislature undertakes to license or certificate the members of an occupational group, it encourages those people to work toward making their prescribed area into an exclusive preserve in which even doctors of medicine may not trespass.

CURRENT EVASIONS OF THE LAWS

As for the futility of creating educational requirements by legislative fiat, one needs only to point out that schools differ in the quality of their teaching, and thus courses with identical titles, when offered at different institutions, may have altogether dissimilar efficacies. And as for the uselessness of enumerating procedures, tools and methods, it should be obvious that as new technics and devices are invented, the attorneys general and the courts will do successive rewriting jobs that may or may not preserve the original intent of the lawmakers.

Perhaps the worst aspect of the fragmentation that has taken place in the health field is to be found in the temptations that are offered to many types of practitioners to wander from their areas of competence. Let's review a few examples.

Last month, on this green sheet, we discussed the attempts that the "mixer" chiropractors are making to extend their activities from the manipulation of the spine and its attendant musculature, for which they have legal authorization, to the treatment of diseases of the alimentary tract and of other organ systems. We also summarized some authoritative findings reported this year from California, regarding the deficiencies of "mixer" chiropractic schools and their faculties.

Now, let's turn to the chiropodists. Doctors of medicine have no reservations about the work of this group of people, at least as regards local procedures for the relief of ailments of the feet. In fact, some prominent physicians teach in their schools, with the full knowledge of the American Medical Association, just as other M.D.'s teach in schools of dentistry, pharmacy and nursing. But some chiropodists have started giving systemic medications—i.e., "shots" and capsules—and though

* Unlike the others, which are licensure acts, the statute pertaining to nurses (both registered and L.P.N.) provides merely for certification.

they may be quite right in thinking that some diseases producing symptoms in the feet can be effectively treated only through an attack upon a cause that lies elsewhere in the patient's body, chiropodists haven't been taught enough about general medicine so that they can safely undertake such treatments.

Finally, in this series of examples, let's turn to the optometrists. Correcting vision through the prescribing of eyeglasses, and administering visual training or ocular exercises, are all that optometrists are either legally or educationally qualified to do. If a patient's vision cannot be corrected to 20/20 by means of eyeglasses, or even when it can be so corrected, if the patient requires inordinately frequent changes in his eyeglass prescription, either a disease of the eye is present or there is a disease somewhere else in his body that is responsible for symptoms in his eyes.

Thus, optometrists have no business performing ocular examinations, certifying to the cause of a patient's blindness, or diagnosing and treating cases of cataract or glaucoma. Yet they undertake these tasks, and in some states they have been given legal authority for so doing.

THE "PARAMEDICALS" ARE SETTING A DESIRABLE PATTERN

A considerable number of occupational groups in the health field—the "paramedicals"—work entirely under the supervision of physicians, unless as is true in a few instances, they are M.D.'s themselves. This, from the general public's point of view, is the ideal arrangement. There are about 80 of these sets of people, the best known being the physical and the occupational therapists, the medical, the x-ray and the cytotechnicians, and the clinical psychologists. The nurses, whom we have previously mentioned, belong in this category, of course. These are members of the doctor's "team," who gather information that will help provide the basis for his diagnoses and for his decisions regarding therapy, and who administer various sorts of treatments that he concludes are necessary. Doctors of medicine, almost without exception, are highly appreciative and approving of the work that they do.

The efforts that the leaders of the paramedical professions make to raise the educational requirements and performance standards of the practitioners of their respective crafts are praiseworthy, and we doctors of medicine are anxious to help them attain their goals, for we want the paramedical services completely staffed with highly competent people, all of whom can contribute efficiently to the care and rehabilitation of our patients. But we should like those leaders to accept assistance from the universities and from the medical profession, rather than go to lawmaking bodies for help.

Several of the paramedical groups have achieved ideal standards without legislation of any sort. Bacteriologists, biochemists and epidemiologists, unless they are M.D.'s, hold no licenses or legal certifications. The individual who holds the top job in any of those fields at a particular institution is the person who either holds the highest academic degree, has his degree from the most highly respected school, has had the longest or the most outstanding record of service, or has done the most significant research. Pretenders, if there were any in those fields, would get nowhere! The occupational therapists, the x-ray technicians and some other groups appear resolved to follow the example of those older professions.

Certification or licensure should have relatively few attractions for the paramedicals, since they work with patients only upon the specific referral and under the constant supervision of physicians. The officers of their organizations deny that they have any intention of practicing independently, either immediately or in the more distant future, for they acknowledge that, lacking the physician's breadth of training, they could easily miss recognizing some of the less obvious facets of a patient's health problem. Thus doctors, rather than patients, are the ones who will pass upon their competency, and the doctors can be relied upon to know whether or not they have been adequately trained.

CONCLUSIONS

On each of the all-too-frequent occasions when we doctors find it necessary to voice attitudes like these, we are entreated to "live and let live." We are anxious to be cooperative and approving whenever the public interest will thus be furthered. But concerning the matter we have been discussing, certain principles are incontrovertible:

1. Legislation is an extremely awkward means of setting and maintaining standards for any occupation, and when educational standards are to be set up, the reputable universities can be relied upon to do the most highly satisfactory job.

2. Almost inevitably, laws concerning occupations vary from state to state, and given the extreme mobility of the American people, dissimilarities produce confusion in patients' minds.

3. Finally, there is the principle which we cited in our discussion of chiropractors and which we have already hinted at here—that none of the ailments of the human body is certainly and necessarily a local affair that can be treated satisfactorily, in all cases, by individuals whose training has been limited to a particular part of the anatomy.

Admittedly, our country needs more physicians, and all of us doctors have more work than we can altogether comfortably do. Thus, we welcome the assistance of the paramedicals who work under our supervision, and we have no strong objections to the activities of the groups that practice independently, provided that they confine themselves to the procedures presently allowed them under Iowa law.

For the time being, however, we see no clear justification for any further legislation of this sort.



MEDICAL HISTORY

120 Years of the Medical Profession In Cedar County, Iowa

Second Installment

H. E. O'NEAL, M.D., AND MRS. VADA YULE KLITH

TIPTON

The doctors who practiced in Cedar County during the years immediately following the Civil War were no less colorful personalities than their predecessors had been.

Dr. Henry Hobart Maynard, born on September 6, 1835, had come to Tipton sometime before 1858. He was treasurer of the Masons' Siloam Chapter No. 19 at the time of its organization on October 15, 1858, and was a trustee of the First Universalist Society, organized in 1859. He was appointed assistant surgeon of the 18th Iowa Regiment on August 8, 1862, and was promoted to surgeon of the 2nd Arkansas Cavalry on March 1, 1864. He returned to Tipton after being mustered out on July 20, 1865, and served thereafter as treasurer of Cedar Lodge No. 11, A.F. & A.M., and as a vestryman of the Episcopal Church.

His election for a three-year term on the school board, in 1872, was by a unanimous vote, but the procedure appears to have been somewhat informal. Twenty-three votes were polled, ten of them while the ballot box was enroute from the school to the courthouse in the evening.

Dr. Maynard completed special study during the winter months of 1874, and was one of the graduates of Bellevue Hospital, New York City, in February, 1875. In that year, he celebrated his fortieth birthday and his tin wedding anniversary, which fell on the same day.

He thought of moving to Burlington for a more lucrative city practice, and secured a young man, Dr. Axline, to take over his Tipton practice in 1877. But after his appointment to the Board of Examiners of the S.U.I. Medical Department, he decided to remain in Tipton, probably because of its greater nearness to Iowa City.

In that year, the telephone fever raged, and Dr. Maynard installed the first line in town, to connect his house and his office. Soon thereafter he purchased the well-known Holtslander place, a half-mile east of town, from Mrs. E. H. Pound for $3,500. A large brick house, a roomy barn and 27 acres of land with orchards, shade and evergreen trees were included in the property. He immediately installed "a Bell electric telephone" to connect his office with this residence, and announced that he would be available at all hours. "Persons desiring to call in the night should do so by contacting the night watchman."

In 1880, Dr. Maynard suggested that the terrible condition of the unsurfaced country roads could be allayed through a method that had succeeded in some parts of Illinois. Instead of returning home with an empty wagon, each farmer who brought a load of produce to town should take back a load of gravel and dump it at the farthest unsurfaced stretch of road on his way home. He thought that in this way the roads would soon be improved in all directions from town. But the objectors suspected that some of the rural lanes and barnyards might receive the first treatment, and the scheme wasn't tried.

Dr. Maynard was one of the delegates from Iowa to the 1880 National Medical Convention in New York, but that event was the beginning of the end of his prominence, at least in Iowa medicine. On September 20 of that year he suffered serious injuries in a buggy accident. Dr. Ristine, from Cedar Rapids, was called to treat him. Subsequently, because of his wife's poor health and his own misfortune, Dr. Maynard moved his family (on October 17, 1880) to California. His friends presented him a handsome gold-headed cane at a farewell oyster supper.

He bought property at Santa Ana, California, and after a time enjoyed great prosperity from his orange groves and his new practice in Los Angeles. For a long period he was a professor of surgery at the U.S.C. College of Medicine, and during the final two years before his death, in November, 1905, the school listed him in its catalogs as a professor emeritus.

H. E. Sansom announced himself as a botanical physician, in Tipton on May 8, 1880, saying that

he was "prepared to minister to all those who are sick, or expect to be, without resorting to the mineral kingdom."

Dr. Peter A. Carpenter, having just received a diploma, formed a partnership with Dr. J. C. Turner in February, 1859. After July 30 of that year, he practiced by himself for a few months. He married Mary Scarborough on November 17, and then formed a partnership with Dr. Cowan. Moreover, during that one busy year, he became a member of the examining committee of the Tipton Union School. But he moved to West Liberty in April, 1860, and in June, 1861, was appointed an assistant surgeon in the Army, and assigned to the 5th Regiment.

Dr. J. M. Long, formerly of Effingham, Illinois, located at Cedar Bluffs in March, 1859. His partner, from 1860 until 1863, was *Dr. W. C. Dodge* who subsequently, in 1871, was the unsuccessful Democratic candidate for coroner. On January 11, 1875, fire entirely destroyed the two-story frame building that had housed Dr. Long's office, a hotel and a storeroom that contained, among other things, the town's post office. The furnishings were almost all removed undamaged, and there seems to have been no loss other than the building itself, which was said to have been insured for $1,000.

Dr. William H. Burns came to Tipton in 1860, and engaged in practice there for 34 years. He had been born in Pennsylvania on January 19, 1825, and had married Miss Sarah Green on October 7, 1849. They had seven children, all of whom had died before the doctor's own death, on January 2, 1894, at 69 years of age.

Following the tornado at Mechanicsville in 1860, Dr. Kennedy reported that in making the rounds of the victims he was assisted by *Dr. Mershaun* (or *Mershon), Dr. Stone* and *Dr. Youngkin.* Of these three, there are other records only concerning Dr. Youngkin. During the years 1871-1873, he was tried by the elders of the Presbyterian Church for drunkenness and finally was suspended from church membership, with his wife. Copies of the decree were given to them, and the document was read to the congregation at a morning service. In 1900, Dr. and Mrs. Youngkin were living in Kansas.

Dr. E. D. Yule was born in Cayuga County, New York, in 1820. At the age of 23, he commenced the study of medicine with Dr. Benjamin Fordyce, of Scipio Center, New York. He graduated from the Geneva Medical College in 1847, and came to Clarence in 1861. He was surgeon of the I. V. C. from June 1, 1862, until October 1, 1864. He had married Miss M. A. DeWitt, of Sussex County, New Jersey, on September 9, 1851. Their only child, a daughter, died in childhood.

By 1874 the new railroads were causing a great many accidents, and Dr. Yule became a railroad physician, but not for long. In June, 1875, he declared it was shameful for his county to be made responsible for all the misfits who were put onto the trains only to stumble off them as soon as they entered his territory. He thought there should be some solution to the problem, and he went so far as to suggest a cemetery!

In January, 1878, it was announced that Dr. Yule and Dr. Ristine, of Cedar Rapids, had performed a very neat piece of surgery upon a man who had fallen down a flight of stairs and injured his right arm quite severely. After a time, the elbow had become immovable, and the arm was rendered useless. The injured bone was decaying, and his general health was being rapidly impaired. The surgeons removed at least 1½ inch of bone both above and below the elbow joint, taking away a total of at least three inches. They then placed the arm in a proper position, and the operation was finished. Sufficient time had elapsed to prove the operation a success.

Dr. Yule was an active Republican in Dayton Township. He died on September 13, 1891.

Dr. William P. Hills, who had been born in Steuben County, New York, began the study of medicine at the age of 22 with Dr. Zenas Jackson, of Prattsburg, New York. He graduated from Jefferson Medical College, Philadelphia, and commenced practice at the age of 27. He came to Iowa in May, 1852, and to Cedar County in 1862. In 1831, he had married Miss M. C. Jeffris, a native of Mifflin County, Pennsylvania. They had no children.

Dr. Hills was a physician in Lowden, a town that became incorporated on May 5, 1869, with the doctor as one of its elected trustees. He was the Democratic candidate for representative in the state legislature in 1871, but was defeated. In 1876, he moved to Clarence, and he was fortunate in not losing his effects during the fire that raged through the business district there in 1878.

Dr. H. J. Minthorn, of West Branch, was a member of the 44th Infantry from May 28, 1864, until September 5 of the same year. In 1878, he bought part of a lot in West Branch for $67, and he was the bondsman for the town's mail service, but no further records of his activities have been found.

Dr. Thomas Coates had been born in Ireland in 1836 and reared in Onondaga County, New York. He was educated at the New York Central College, and then commenced the study of medicine, graduating from Rush Medical College, Chicago. He married Emma S. Cross, of York County, Pennsylvania, in 1849, and they had four children, Thomas, Rose, Jessie and Nellie. He was a charter member of Euclid Lodge No. 177, A.F. & A.M., and was its first worthy master, in June, 1866. He was a delegate to the Republican Judicial Convention, at Cedar Rapids, in 1870.

Dr. Coates was the only doctor on the county income tax lists published in 1871 and 1872. He was shown to have paid $3.60 and $3.30 in those years, respectively, the highest tax, $58.40 having been paid by a wealthy farmer. In May, 1878, it was reported that Dr. Coates had arranged his

office nicely, with his name lettered in gilt across the curtain, and he must have felt that he had accomplished a part of his life's mission. Two years later he arranged to have his office and his dwelling connected by telephone. But he sold his property to Dr. William Greig in June, 1882, and on April 30, 1883, he left with his family for California, where he died on September 9, 1900.

Dr. J. F. Boal practiced in Tipton in 1864 and 1865, but then moved with his wife and daughter to Buda, Illinois.

Dr. A. A. Bailey, a homeopathic physician, practiced in Clarence from December, 1865, until May, 1866. During that time, we are told, Clarence had six doctors within its corporation limits and was very healthy, notwithstanding so many medical men!

Dr. Jacob C. Batdorf located in Mechanicsville on May 18, 1865. He served as Pioneer Township secretary of the Cedar County Sunday Schools. In 1869, he was elected worthy master of Patmos Lodge No. 155, A.F. & A.M. He was a town trustee and health officer of Pioneer Township for several years.

Dr. Batdorf went to Grand Rapids, Michigan, in 1888, and in 1895 he was conducting a medicine show there, claiming to diagnose and cure illnesses upon receipt of $1.00 and a lock of hair from the patient.

Dr. Isaac N. Ross had been born in York County, Pennsylvania, on August 3, 1837, and had come to Cedar County with his parents in 1853. During the Civil War, he served with the 35th Regiment, I.V.I., Co. K, and participated in the charge that finally took Vicksburg, on May 22, 1863. He studied medicine and graduated from Rush Medical College, and for some years thereafter he practiced his profession at Durant, Victor and other towns, but then he resumed farming. He had married Miss Sarah Moore, of Beaver County, Pennsylvania, in 1858, and they had seven children of whom four lived: Clara L., Joseph N., Nettie N. and Zella.

A *Dr. Eckleman* and a Mr. Wetzel opened a drug store in May, 1866. Since Dr. Eckleman was a physician, the establishment was able not only to dispense drugs but provide medical and surgical attention as well. The doctor was further noteworthy, it was said, for having had a large practice in the West and a consequent knowledge of the prevailing diseases. Furthermore, he could speak German.

He carried a pocket lantern that was certainly an innovation. It could be folded up into the shape of a book and carried in the vest pocket, but it nevertheless contained three candles about five inches in length and a box of matches.

Drs. Mors, Fuller and Dodge offered their services, on October 3, 1867, "to those afflicted with any form of Disease; of ear, eye, nose, throat, lungs, heart, stomach, liver, kidneys and bowels." They claimed to be up-to-date, and undertook "never to produce one disease to cure another." They made a six-month stay and moved on.

Dr. D. A. Rodebush practiced in Tipton from 1867 until he moved to Mechanicsville in 1869. In the latter year, he pleaded guilty to a charge of keeping for sale and selling spiritous liquors in violation of the State Prohibitory Law. He was fined $40 and costs. He died very suddenly, of a hemorrhage of the lungs, on March 16, 1872, and thereafter his wife returned to Tipton and operated a successful millinery business for many years.

Dr. H. T. Emeis, of Durant, was first in the news because of a serious accident that befell him. His horse stumbled, throwing him to the ground and fracturing his left leg above and below the knee on March 11, 1868. The doctor owned a drug store, and was clerk of Farmington Township, depositor of the Cedar County Bible Societies, and recorder of the Durant School Board. He was one of the 10 delegates to the Centennial, in 1876, and with the others took a side trip to Niagara and Washington.

Dr. John Frederic Houser was a native of Switzerland who had come to this country at 10 years of age, in 1847. He came to Louisa County, Iowa, from Maryland, in 1865, and moved to West Branch in 1874. He had married Delia Carpenter, a native of Indiana, in 1866, and they had one child, Lillian. Before locating in West Branch, Dr. Houser had practiced five years in the village of Downey.

He was held for the grand jury in 1876, charged with attempting to procure an abortion. Dr. Maynard, assisted by Drs. Darner and Bailey, had made the postmortem examination on the girl's body, and he was taken into custody upon their testimony. Dr. Houser published an indignant letter in the WEST BRANCH TIMES, asserting that he had no intention of abandoning his home or practice regardless of how much his professional enemies might want him to do so, and declaring that his reputation was more valuable to him than money or even a professorship in the Medical Department of the Iowa State University—the latter, no doubt, being a reference to the responsibility that Dr. Maynard had been assigned.

When the grand jury met, Dr. Houser came off with flying colors, for the members refused to return a true bill. He had a further brush with the law in 1879, when he was found guilty in Justice Tuthill's court of having sold liquor illegally, but he appealed to district court, his witnesses swore vigorously in his defense, and a petit jury, after a comparatively brief deliberation, found him "not guilty."

Dr. Houser moved to Iowa City in August, 1881.

Dr. N. S. Hubbell, a homeopathic physician, was in Mechanicsville in 1869. He had graduated from the Cleveland Medical College in 1865. He was elected a town trustee in 1870, and in 1878 was elected mayor on the Temperance ticket. He

served as mayor for several years, was a school director, held a seat on the Republican County Committee and served as a justice of the peace. He was the unanimous choice as leader of a singing class that he organized in 1890. It was noted from time to time that he regularly attended the graduation exercises of the Homeopathic Medical Department at S.U.I.

In 1900, he sold his residence, and he later retired to Cedar Rapids, where he lived out the remainder of a very long life, dying in 1930 at the age of 94 years.

Dr. Joseph Boken Jackson, although he had been educated in the medical theories generally accepted in his day, espoused a new and independent theory based upon "electro-chemical science." But it wasn't his ideas on therapeutics that made him the talk of the town; it was the manner of his death.

After living in Tipton for several months, both Dr. and Mrs. Jackson were taken suddenly and violently ill on a Sunday night in March, 1870. Dr. Jackson was convinced that poison had been administered to them, and the physicians who attended them agreed that somehow or other they had ingested poison, all right. Dr. Jackson died on the following Wednesday night, but his wife recovered.

The coroner's jury took considerable time in arriving at a verdict, and in the meantime there was general consternation over the bill for the inquest: $465.00. The county supervisors adjourned their meeting without voting on whether or not to accept it, and it wasn't until their July session that they had recovered enough to disallow it.

An itinerant tinsmith was arrested, charged with responsibility for the doctor's death, and brought to trial. But when Mrs. Jackson absented herself from the jurisdiction of the court and failed to respond to official requests that she appear as a witness, the prosecution seemed not to have a case. The tinsmith was admonished to leave Cedar County, and there the matter rested, except for some headshakings, winks, etc.

Dr. Charles G. Wheeler, born December 7, 1806, in Wayne County, Pennsylvania, moved to Michigan in 1844, and to Noble County, Indiana, in 1848. In 1864, when his health was failing, he retired from the active practice of his profession and moved once more, this time to Marion, Iowa. In 1869, he came to Mechanicsville. While reroofing a shed, in 1871, he fell and fractured a shoulder blade in two places. He died on May 22, 1874, at the age of 68, leaving a wife and two children and a 91-year-old mother.

Drs. Isaiah and Savina L. Williams located in Clarence on October 12, 1869. On their arrival, Dr. Isaiah was already 56 years old and Dr. Savina 42, but they practiced medicine in that town for 32 years before retiring. They were members of the Methodist Church.

Dr. Isaiah Williams was a man of varied interests and talents. He was admitted to the practice of law in 1872, he was an agent for western railroad land in Kansas and made many trips west with prospective buyers, he began publishing the Clarence paper in 1880, and at least on one occasion, in 1887, he started giving a course of lectures in geology and attracted a good sized audience. But he attracted most attention with his practical jokes.

In 1879 he was, he said, busily engaged in planning to drain Lake Erie, and claimed that he could defray his expenses through the sale of land and fish. An article solemnly reporting the project occupied two-thirds of a page in the newspaper. Before composing the next week's issue, the editor had been rudely disillusioned, and he scolded the doctor roundly, asserting that in talking of boring a tunnel under Niagara Falls, the physician had bored everybody who listened to him.

Of Dr. Savina Williams' activities in Clarence, the only record concerns the celebration of Isaiah's and her golden wedding anniversary and her seventy-fourth birthday, on October 27, 1801. Dr. Isaiah lived at least until 1903, but Dr. Savina survived him, dying on December 23, 1910.

Dr. L. P. Atkins settled in Rochester prior to 1870, was a member of the "Greenback Club" and was often the speaker at its meetings.

Curiously enough, he left an interesting comment regarding his early obstetrical practice. In a footnote on the birth record of a child born to a Mr. and Mrs. Robert Anderson, on October 12, 1883, he wrote: "This is the one-hundredth birth attended by me in the Rochester vicinity. I have had no case of puerperal phlegmasia, one case of phlegmasia dolens, one case of mammary infection."

In 1898, as justice of the peace, Dr. Atkins performed the tenth anniversary ceremony for a couple whom he himself had married. It is regrettable that no more information is available on this grand old man.

Dr. George S. Focht was born at Williamsburg, Pennsylvania, January 10, 1845, and came to Cedar County at the age of 16. He attended the Literary School in Tipton, studied at Mendota, Illinois, and graduated from Rush Medical School, Chicago, in 1870. Immediately thereafter he returned to Tipton, and in 1871 was appointed "Pension Examining Surgeon." He married Sarah W. Wingert, of York Prairie, in September, 1874, and built a fine dwelling on Cedar Street near the North Side Schoolhouse, in 1875.

He finished a six-month course at Bellevue Hospital, New York City, in February, 1880, and thereafter made a practice of spending a few weeks of each year in Chicago, attending refresher courses at Rush so as always to be in line with any advances in his profession. He attended the meeting of the National Medical Association in Chicago in 1887.

His salary as county physician, in 1881, was $200, to be paid quarterly. In the same year, the paper

told of an occasion when Dr. Focht came downtown wearing his Sunday clothes on a weekday. During the night a thief had carried away his everyday suit, together with the hat, shirt, socks and underclothing that he had worn the previous evening. With the clothing, the thief had taken a gold watch worth $150, some money, a hypodermic syringe and a thermometer, and after eating a hearty meal from the doctor's pantry, had helped himself to a saddle and bridle, and had stolen one of the doctor's horses.

Dr. Focht moved to California in 1903, but because he owned some land in Plymouth County, Iowa, he made a practice of returning here for a visit each fall. He had only recently reached Pasadena after his annual trip to Iowa in 1930, when he died, on October 20. His burial was at Oak Hill Cemetery, Cedar Rapids.

Dr. Samuel Keith, formerly of Clinton, Iowa, and originally from Northfield, Vermont, located in Mechanicsville in 1870. He was superintendent of the Presbyterian Sunday School during eight of the 11 years that he lived there, and his records, beautifully worded and written in a large, clear hand, are still extant. He was interested in the Dubuque and St. Louis Railroad, and was a member of the Republican County Committee. On June 23, 1881, he moved to Minneapolis.

Dr. E. H. Ingraham, a homeopathic physician, practiced in Tipton from 1871 until 1875. He was interested in the lectures that were given each winter. Even though he remained for only a short time, he probably had more successive office addresses than any other doctor, before or since, for he moved every few months. He was the stepfather of two little girls, Stella and Emma Chase, who along with about 300 other people were heirs to the celebrated Chase estate, which had been so long in litigation in the English courts. According to a decision handed down in 1873, $200 million was to go to the American descendants of the family.

Dr. A. R. Logan, an eclectic physician, moved from Davenport to Tipton in 1871. He had spent a few days each month in Tipton for several years. He stayed a couple of years, and then returned to Davenport, but again resumed his monthly visits.

Dr. Thomas Rigg, a physician and druggist, had been born in the north of England on October 23, 1814, and had come to America in 1840. After studying medicine in England and in Philadelphia, he came to Johnson County, Iowa, where he engaged in farming as well as in medical practice. He was also in the drug business with his son in Iowa City. In 1871, he came to Tipton to practice medicine and operate a drug store. He was considered an authority on pharmacy, and was often called upon to give expert testimony in court trials.

He was first married to Mary Musgrove, an Englishwoman, who died in 1869. They had five children. In 1870, he had married Kate James, from Ohio. In 1882, he and his second wife moved to Los Angeles, and purchased some orange properties. Dr. Rigg died on February 21, 1890, at Pasadena, and was given a Masonic funeral there.

A father and son, *Drs. Samuel and L. P. Ensign,* came to Tipton on April 18, 1872. The younger man had only recently received his M.D. degree at N.Y.U., and along with his degree he had been given the "Thompson Prize" offered for the best record in clinics. In January, 1873, he went to Chenango City, New York, to practice, but in 1878 he returned to the West and settled in York County, Nebraska.

Dr. Samual Ensign had had 30 years of experience before coming to Tipton. He had previously practiced in Steuben County, New York. His daughter, a graduate of the Alleghany Academy of Music, advertised for pupils shortly after their arrival, but within a year she married Rev. George Briscoe, of Tipton. Dr. Ensign was vice-president of the Cedar County Bible Society for a number of years. As county physician in 1877, he received $75 as his stipend for the year. He was chairman of the Committee for a Library and Reading Room in that same year, and he was conspicuously identified with the temperance and other reform movements.

On March 31, 1879, he left for Arborville, York County, Nebraska, where his son, shortly after arriving there, had fallen seriously ill. The elder man said that he expected to locate permanently in Arborville, and to open a drug store in connection with the practice of his profession.

Dr. A. C. Latham practiced in Fairview from 1872 until 1880. He lectured on physical training at the School Institute in 1872, was assessor of Springfield Township and was secretary of the Springfield Sunday School Convention. He was elected superintendent of the Methodist Sabbath School. Dr. Latham and his mother had lived in Vermont prior to coming to Iowa.

Dr. David Cantonwine was born in Bedford County, Pennsylvania, in 1819, and lived there until he reached 18 years of age. Then he went to Mexico, where he remained 2½ years. He had started studying medicine at the age of 17, and after returning from Mexico, attended a course of lectures in Cincinnati and one in Philadelphia.

He settled in Linn County, Iowa, in 1841. His first wife was Hulda White, a native of Indiana, who died in 1856. They had four children, Mary, Alvira, Julius and Gideon. In August, 1859, he married Cynthia Irish, of Erie County, New York. They had a family of six children: David, Austin, Frank, Emma, Walter and Burton.

Dr. Cantonwine located in Massillon in 1873. He had a large practice, but still found time to crack a joke and to talk on scientific subjects. In 1878, he caused considerable discussion by stating that a man could die, shuffle off this mortal coil, get a glimpse of the "country beyond the river," and then be brought back to this world of sin and sorrow. He cited the case of the seven convicts frozen to death in Liberia, of all places, reporting in ap-

parently complete seriousness and with what purported to be great scientific detail, how five of them were brought back to life.

In 1884, the Deming Hotel, in Massillon, was put out of business and Dr. Cantonwine lost his new office. The building had been bought by the doctor the previous fall, but it was destroyed by fire. The doctor had a carload of lumber shipped out from Davenport to be used in the construction of a new house and office.

Dr. James Donnelly settled in Tipton in about 1873, though *settled* may not be quite the right word to use in speaking of this independent, law-breaking, fighting, and yet charitable man.

In 1878, he gave it as his opinion that a prisoner charged with forgery had died of congestion of the brain. Dr. Focht disagreed, opining that the body of the victim, in the postmortem state, indicated the ingestion of poison. The coroner's jury, after tossing the hot potato back and forth, decided that death had resulted from undetermined causes.

In 1879, he was arrested on the charge of suggesting to an 18-year-old boy that he should vote in an election. He was found guilty and fined, but before he reached home he was arrested again, this time for assault and battery. Someone had made some unflattering remarks about his character.

He was the center of a boiling controversy throughout the year 1880 because of a girl, supposedly his sister, who had been living with him. He married her off, in January, to a young farmer, but then convinced the young man that they shouldn't live together. In September it was revealed that she had been previously married and never divorced, when her first husband filed a divorce suit. Then, in the December term of court, he sued Dr. Donnelly for $5,000, charging him with seduction and alienation of affection.

The doctor hid the girl, and then took her to Wheatland, where she boarded a train for parts unknown. Desiring to hedge a little, he had posted bond in that latter action before spiriting her away.

In 1881, he was involved in a much-publicized abortion case. After his acquittal in a Muscatine court, he brought suit against the girl's father, and Drs. Cotton and Focht for false and malicious arrest. The court found no conspiracy, since no individual account could be represented as evidence of joint responsibility, and dismissed the case, charging court costs to the plaintiff.

On January 23, 1883, while Dr. Donnelly was in Indiana, his house burned down. Fortunately, before leaving he had removed his silverware and all of his other valuables, but the insurance company didn't want to settle the matter to his satisfaction, and he brought suit. When he had lost, his lawyer had to sue him for his fee. Curiously, throughout the latter action, the attorney maintained that the doctor was "such a nice little man!"

Dr. Donnelly married Ellen E. Cook, of Vail, in December 1886. Thereafter, the neighborhood was kept stirred up by the bride's shrieks, calls for help, and protests over his treatment of her. She went home to her mother, but returned, and on January 8, 1891, they moved to Carroll, where the doctor planned to build a good race course and a breeding stable. He had had several good horses in training while he lived in Tipton, and he had raced them at Mechanicsville, at the Tipton Fairgrounds, and at Davenport.

In spite of his inability to live comfortably with a considerable number of his fellow citizens, Dr. Donnelly had built up an extensive medical practice. He was devoted to his patients' welfare, and even his non-friends had to concede that he was always kind to the poor.

Tipton was a relatively quiet place after his departure, but what Tipton had lost, Carroll had gained. On September 30, 1892, he discovered that his wife was about to leave for Chicago with another man, and succeeded, unseen, in boarding the train and seating himself in the same coach with them. He hid behind a newspaper and contained himself as long as he could. But finally the situation got the better of him and he undertook to trounce the wife-stealer. The conductor ended the episode by putting the whole party off the train at Grand Junction.

Dr. Donnelly died shortly after that episode, but trouble persisted nevertheless. On January 19, 1893, his will leaving his property to his brother's children was contested by his "wives" and his son, Ora. His first wife had divorced him after he had been convicted of bigamy. His second wife—really not a wife—had remarried. The court ruled that his third wife (the widow Ellen) should have one-third, and his son Ora should have two-thirds of the estate. After the decision, as a fitting finale for this incredible series of events, Ellen and her stepson Ora were married!

To be continued.

FINGER-JOINT PROSTHESES DESIGNED AT S.U.I.

Tiny artificial finger joints are being used, probably for the first time anywhere, at the S.U.I. College of Medicine to help correct hand deformities caused by rheumatoid arthritis. The new devices were displayed late in August at the Third International Congress of Physical Medicine, in Washington, D. C.

Dr. Adrian E. Flatt, the S.U.I. orthopedic surgeon who developed the technic, says that the stainless steel alloy joints have been used to replace 30 diseased finger joints in a selected group of patients. Although describing the results as "sometimes dramatic," he emphasizes that thus far the prostheses have been used only in a limited number of special cases. The Iowa Chapter of the Arthritis and Rheumatism Foundation helped to finance the antecedent two years of research.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

August—a tired, easy pace characterized that month, and surely no one could have written poetry, or even high-flown prose in its atmosphere. On that premise, here are some notes, in diary form, on the endeavors of your president during that month:

August 1-11—In high spirits. A nebulous new plan for visitations and the convention has been drafted. Mrs. B. F. Kilgore, Mrs. R. E. Hines, Mrs. Noble Irving, Mrs. Louis Goldberg and Mrs. D. W. Wirtz authored it. My personal judgment of this plan?—Terrific!

August 11-15—To French Lick, Indiana, to attend a regional legislative conference.

The area we walked into on the morning of August 12 appeared to be a huge crystal ballroom; actually, it was a huge crystal ball! With the help of the keen eyes of Mr. J. J. Eley, we saw America as some of us have never seen her before. The various occurrences in the political arena are not separate, independent events which, like wisps of vapor in the sky that coalesce to make up cloud formations, sometimes pleasing, at other times frightening, but then disintegrate and vanish, seldom leaving any permanent effects. Rather they are yarns of different colors, different weights and different qualities that are being woven altogether permanently into the fabric that is America. Before our eyes, our country is being changed —indeed remodelled!

The first day was an educating and awakening experience. The close of the day brought the question: "What can we do to influence and to direct these changes that are taking place?"

The second day brought us designs for action. Representatives of four states—Iowa, Ohio, Illinois and Georgia—told what is being done in their respective areas to control the nature and speed of change in America's social and economic fabric. Dr. Homer Wichern, of Des Moines, described the plan of action that has been undertaken by the Iowa State Medical Society.

But the absolute highlight of that session, for me at least, was provided by another of the speakers, Mr. T. C. Petersen. (Do you suppose I could have been prejudiced? My dad was P. C. Petersen, and as I subsequently learned, this Mr. Petersen who spoke at French Lick, quite like my father, is an immigrant Dane.)

Mr. Petersen spoke of the need for emancipating the farmers—for getting the federal government out of farming. Furthermore, he outlined a definite plan of action. To achieve that objective, we must ally ourselves with like-minded organizations. We must be informed. We must act.

World history shows a set pattern of progression in all governments:

FREEDOM
leads to
SELFISHNESS
which leads to
APATHY
which leads to
DEPENDENCE
which leads to
BONDAGE!

This progression seems inevitable. At which stage is America today? Are we selfish? Are we apathetic? Are we dependent? We certainly are no longer altogether free!

August 22—District III entertains State Auxiliary officers. Palma Hegg, the third district councilor, was an excellent M.C. this day at Brooks Country Club, Lake Okoboji. The environment left nothing to be desired. The green and blue decor complimented the attractive women gathered to represent the various counties in the district.

Essentially the gathering was a talent show and pep rally. Inspiration in both of those areas was provided by Millicent Munger, Mary Edington, Jane King and Elizabeth Trie. Each county reviewed its activities. Hazel Lammey briefed the group on materials available from the state office for each of the various projects. Telegrams were sent to senators and representatives urging their support of the Mills Bill.

Events in General: Notice came from Mrs. Ritter that Iowa was third of all the states in percentage increase in donations to the American Medical Education Fund during the past year. The Ethel Gastineau trophy was the award given to the outstanding state. Iowa had an increase of 145 per cent in donations. Good work, Iowa Auxiliaries!!

COUNTY AUXILIARIES

Page

Mrs. Frances Meng, wife of Dr. Ralph Meng of the Clarinda Mental Health Institute, was killed in an automobile accident near Villisca, on August 1, as she was returning to Clarinda with a carload of Boy Scouts from the Scout Jamboree.

Before her death, Mrs. Meng was active in the Page County Auxiliary, and had just helped in the organization of a Future Nurses' Club in Clarinda. The club had had several meetings during the summer. Mrs. Karl Katlin will continue work with the group.

Marshall

Dr. and Mrs. Jack Crandall and their three children left Marshalltown on September 1 for a four-month stay in Colorado. The doctor will observe at Denver Children's Hospital and Denver General Hospital, but the family will make its home in Aspen.

Dr. and Mrs. J. E. Irvine have located in Marshalltown, following the completion of Dr. Irvine's internship at Broadlawns Hospital, Des Moines.

Dr. and Mrs. A. B. Cloud and their family have moved from Melbourne to Marshalltown. Mrs. Cloud is participating actively in the Future Nurses' Club program, and has organized some clubs in Marshall County.

Black Hawk

All Auxiliary members are cordially invited to accompany their husbands to the clinic meeting that is being sponsored by the Black Hawk County Medical Society, in Waterloo on October 20.

The Auxiliary has planned a day of entertainment for the doctors' wives who come, the highlights of which are to be a luncheon and a style show. The physicians and their wives will enjoy themselves together at the dinner and dancing in the evening.

Be sure your reservations are made in plenty of time so that you may be sure to participate in this eventful day's activities. Details of the program, and reservation information are to be found on the invitation that was mailed to each Auxiliary member in the state.

DISTRICT MEETINGS

District I

Mrs. M. F. Kiesau, of Postville, the councilor, has arranged a district meeting to be held at Hotel Winneshiek, in Decorah, on October 12. All phyicians' wives in the district have been invited to attend, and several State Auxiliary officers will be present.

District VI

Mrs. J. F. Gerken, of Waterloo, the councilor, has planned a district meeting at which the members of the Marshall County Auxiliary are to be the hostesses. The meeting will be held on Tuesday, October 11, at the Fisher Recreational (Civic) Center, in Marshalltown. All physicians' wives in the district have been invited to attend, and it is hoped that several State Auxiliary officers will be able to be present at this meeting, too.

District III

All physicians' wives in District III were invited to attend a meeting held at Brooks Country Club, on Lake Okoboji, on August 22. Mrs. L. R. Hegg, of Rock Valley, the councilor, presided at the meeting, and members and guests from six counties were in attendance. Mrs. R. F. Nielsen, of Cedar Falls, the state president, Mrs. E. B. Dawson, of Fort Dodge, the third vice-president, and Mrs. W. K. Hicks, of Sioux City, were some of the guests.

Each county Auxiliary reported on its most successful project, and briefly discussed its overall activities. Mrs. D. H. King, of Spencer, was unable to attend, but sent greetings and commended the members of the group for their cooperation. The guest speaker was Miss Elizabeth Trie, of Sibley, a member of the Governor's Commission on Aging. She discussed the senior citizen problems to be found in typical communities, and reported on the recent survey of persons over 65 years of age.

HANDICAPPED CRAFT SALES

We must maintain and even redouble our interest in handicapped craft sales. Two such events have already taken place this year:

Black Hawk County, in April. Chairman: Mrs. L. T. Winninger

Webster County, in May. Chairman: Mrs. E. E. Moore

Four more of them are to be held this fall:

Clay County, September 12-17. Chairman: Mrs. F. D. Edington

Polk County, October 3-8. Chairman: Mrs. J. G. Thomsen

AMEF Note Paper and Envelopes
$1.00 per pack of 10 each
Order from
Woman's Auxiliary
529-36th Street
Des Moines 12, Iowa
Proceeds will be donated to the American Medical Education Foundation

Dubuque County, October 27-29. Chairman: Mrs. E. E. Olin

Woodbury County, November 14-16. Chairman: Mrs. F. D. McCarthy

These Auxiliaries furnish the sales personnel and arrange the sale locations. The items offered for sale have been made by the handicapped individuals participating in the program of the Iowa Society for Crippled Children and Adults. By joining in sponsorship the Auxiliaries help very greatly in an all-important rehabilitation effort.

MRS. ELMER A. LARSEN

In the September 5 issue of the DES MOINES TRIBUNE, Mr. Herb Owens devoted his column "Along the Way" to an account of the immediate past-president of the Woman's Auxiliary to the Iowa State Medical Society, Mrs. Elmer A. Larsen, of Centerville. Since that newspaper has a smaller circulation than its companion, the DES MOINES REGISTER outside the capital city, a brief recapitulation seems in order.

Mr. Owens related that Mrs. Larsen is regional chairman of the AMA Auxiliary's Careers Committee, to recruit young people for careers in the health field; was an organizer and is a director of the T.T.T. Loan Closet, which lends sick-room equipment for use in private homes; is Appanoose County chairman of the Iowa Tuberculosis Association; is county service chairman for the National Foundation (formerly the National Foundation for Infantile Paralysis); and holds a similar post for the Iowa Division of the American Cancer Society.

Besides, he went on to say, she is president of the Centerville Band Mothers, and acts as one of the chauffeurs when her daughter and other members of the Centerville Cadettes, a drill team, make out-of-town appearances; she is president of the Appanoose County Republican Women; is a member of the board of directors of the Caravan Trail Girl Scout Council; and is a member of the Centerville Park Board. Although she is an Episcopalian, she has taught Sunday school at the Presbyterian Church. She is a member of the Centerville Women's Club, the Order of the Eastern Star, the P.E.O. and the Delta Delta Delta sorority.

The profession for which she prepared herself was dietetics, receiving her training at S.U.I. and Johns Hopkins.

Along with her astonishing number and variety of organizational activities, he said, Mrs. Larsen attends a ceramics class regularly and is enthusiastic about that form of handicraft art.

Listen!
Look!
Talk!
Argue!
Think!
then VOTE

MEETING YOUR MEMBERS

Candidate No. 4 Learn About Mrs. L. E. Larson

You were warned when this series started that dictatorial methods would always be employed.

This choice reflects a real conspiracy. Being a Scandinavian, it is no surprise to you that I should choose the name Larson for special attention. Winneshiek County, however, is justly proud of this gal, not only for her beauty but for her talents. You may ask the Methodist Church, the T.B. association, or the nurses association. Each of them will testify that she is a faithful servant. Besides Auxiliary work, she plays golf and travels. Surely this evidence confirms for you her fine balance of work and play. Minneapolis, Minnesota had to relinquish her to Iowa.

This gal sure
Has eyes of brown.
Her hair is too,
Whether up or down.

A P.E.O.
She's lots of fun.
To Europe too
Found time to run.

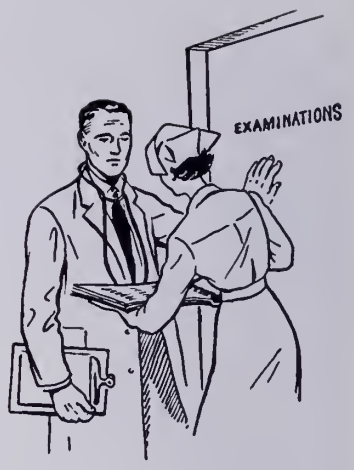
Suffice to say
In these few words,
Her husband in
General practice serves.

Norwegian—Dane
Or Swede—she is,
And born in
Minneapolis.

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
President-Elect—Mrs. B. F. Kilgore, 5434 Woodland, Des Moines 12
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. W. W. Sands, 1515-41st Street Place, Des Moines 11

THE DOCTOR'S BUSINESS



Life Insurance Requires Planning

HOWARD D. BAKER

WATERLOO

OWNERSHIP OF LIFE INSURANCE

Prior to the enactment of the 1954 Revenue Code, life insurance proceeds were included in a decedent's gross estate, thereby increasing the estate taxes. The 1954 Revenue Code and subsequent regulations, however, have made it possible and profitable to avoid this inclusion, at least partially, by transferring ownership of a portion of one's life insurance to his wife or children.

Under the old Code, if one paid the premiums on a policy, the death benefits were included in his estate regardless of ownership. What must one do to qualify his insurance under the new provisions? The important thing is to make sure of retaining none of the perquisites of policy-ownership. These include the right to borrow on the policy, to pledge or assign it as collateral, to surrender it for cash, to change the beneficiary provision or to change the ownership. If none of these privileges of ownership are present, one can still pay the premiums on the insurance, but have the benefits excluded from his estate. Tax savings on a $10,000 policy transferred in this manner can range from $300 to $7,500, depending upon the size of the estate.

You can transfer ownership of your policies with the help of your insurance agent. It should be pointed out, however, that the transfer of policies already in force may create a gift-tax problem, and for this reason you should make such a transfer only upon the recommendation of your estate attorney. Thus, your individual course of action should be governed by the combined advice of your insurance counselor and the attorney who handles your estate plan.

COORDINATION OF LIFE INSURANCE WITH OTHER ASSETS

In most cases, life insurance is the major asset in a professional man's net worth. In both estate planning and retirement planning, life insurance must be given proper weight in relation to his other holdings. Regardless of the purpose for which life insurance is carried, one should clearly recognize that it is a capital asset that will produce a fixed number of dollars, either upon the death or at the retirement of the insured. Coordination of life insurance with other assets means simply putting the pieces together into a plan that will provide maximum benefits from all property owned.

Consider the case of Dr. "A" who has insurance that will provide a clean-up fund and enough money to pay off his mortgage, and will pay Mrs. "A" $150 per month for life in case of his death. The doctor's goal, however, is to provide her $300 per month for life in case he dies. On the basis of this information, we would conclude that Dr. "A" has need for substantial sums of additional insurance. But we haven't considered the fact that his medical building will provide additional income for his widow, and that he owns substantial amounts of stocks and bonds that will further supplement her income.

Or take the situation of Dr. "B" who is planning for his retirement. It has been determined that he will have to invest $175 per month, to age 65, equally in fixed and variable investments to achieve his retirement goal and to maintain a proper balance in his investments. We haven't considered, however, that his life insurance will have attained a cash value of $40,000 when he reaches 65 years of age. A proper consideration for these cash values will reduce his required monthly investment, or will increase the retirement income that will be available to him at age 65. More importantly, it will affect the ratio of fixed and variable dollar-value contracts in his future investments.

Whether you are planning your estate, programming your life insurance or planning for your retirement, coordination of life insurance with your other assets cannot be overemphasized.



Symposium: Modern Concepts in Coronary Artery Disease—Their Practical Application*

I. How to Diagnose Coronary Disease

HARRY B. WEINBERG, M.D.

DAVENPORT

Coronary heart disease is sometimes quite obvious, but at other times can be obscure and very difficult to diagnose. Fortunately, the practicing doctor can do about as well as the consulting cardiologist, for it doesn't take elaborate equipment or intricate knowledge. The secret lies in a simple instrument—the doctor's brain. If the consultant is more successful in diagnosis, it's not because his instrument is newer or more powerful, but because he uses it to better advantage—by taking a careful history, by seeking out the symptoms, and by thinking out the diagnostic possibilities.

By and large, the diagnosable manifestations of coronary heart disease fall into three categories: (1) angina pectoris; (2) acute myocardial infarction; and (3) the intermediate coronary syndrome.

ANGINA PECTORIS

Angina pectoris is diagnosed almost exclusively from the description given by the patient. It should be thought of as a discomfort, rather than as a pain, for the patient often describes it as a feeling of tightness, pressure, shortness of breath, choking, indigestion or gas, and he may answer "no" when asked whether he has chest pain. Characteristically, the discomfort is felt centrally in the chest, and is often demonstrated by a clenched fist. It may or may not radiate to the left arm or elsewhere. The discomfort usually appears during exertion, and causes the patient to stop whatever he has been doing. Angina has a definite pattern of duration, lasting from perhaps 30 seconds to 20 minutes, but usually from two to six minutes. A momentary jabbing pain is not angina pectoris, nor is the pain that remains unchanged in intensity for hours. It is relieved by taking nitroglycerin under the tongue. Such relief is not necessarily proof of angina, for other pains might also be relieved by this means, and of course, the relief following the ingestion of the medication might be merely coincidental. On the other hand, pain that is not relieved is usually not angina, especially if it is certain that the drug was active and was taken properly. Good proof of drug activity is the occurrence of the nitrite effect, as evidenced by flushing, fullness or pounding in the head. In judging the effect of nitroglycerin, one should be sure to find out how and when the relief occurred. It must be prompt and complete in order to be significant, and the gradual disappearance of the pain 10 or more minutes later, or after the administration of four or five tablets, actually represents a negative result. Even in the complete absence of corroborative findings such as electrocardiographic abnormalities or hypertension, angina must be diagnosed when the patient describes symptoms such as those enumerated above.

ACUTE MYOCARDIAL INFARCTION

The severity of acute myocardial infarction is extremely variable, from mild to grave. There is no need to describe the typical severe case, for it is easy to recognize, but the milder and the atypical cases can be difficult to diagnose. The electrocardiogram usually shows characteristic changes, but these may be delayed up to as much as five to seven days, and often the diagnosis depends on the changes in serial records, rather than on any single tracing. The electrocardiogram may fail to be diagnostic for several reasons: (1) The tracings may have been taken too early and not repeated at the optimal time. (2) The

* Presented at the annual meeting of the Iowa State Medical Society in Des Moines, Iowa, on April 26, 1960.

changes may be nonspecific or atypical. (3) Perhaps preexisting heart disease has produced so much change in the electrocardiogram that fresh infarction cannot be identified. (4) A left bundle branch block may be present that masks features of recent infarction.

Recently, it was noted that certain enzymes such as the glutamic oxaloacetic transaminase will increase in the serum when there is necrosis of heart muscle. The injured myocardium apparently releases its enzymes into the blood, and the serum level rises quickly with an acute myocardial infarction. The increased transaminase is found as early as a few hours after the onset, it probably reaches its peak at 48 hours, and it returns to normal by the third to the fifth day. This is an extremely useful test for acute infarction, and should be used freely. In the near future, we may be using additional tests involving other enzymes and trace minerals.

In mild cases of infarction, the symptoms may be scarcely greater than in simple angina, and success in diagnosis will depend upon clinical suspicion. Thus, that suspicion must be keen enough to make the physician persist in searching for evidence of myocardial necrosis.

INTERMEDIATE CORONARY SYNDROME

There is a very important category of coronary heart disease that must be considered separately from the two that have already been discussed—one that is graver than angina, yet shows no myocardial necrosis. In this intermediate syndrome, the pain is more severe and lasts longer than does the pain of angina, or it begins to occur more frequently and comes on with less provocation. The tempo of the symptoms indicates that something has brought about a worsening in the patient's status, and we can presume that this has happened because of new narrowings or even occlusions somewhere in the coronary arteries. The electrocardiogram may show T-wave changes, but no Q-wave will develop, and temperature, white count and transaminase will remain normal or show only borderline elevations, indicating that significant myocardial necrosis has not occurred.

The importance of this syndrome lies in the fact that with such a compromised circulation, frank infarction may soon develop. By looking back, we can find that many acute infarcts have been preceded by such premonitory symptoms, and there is good reason to believe that recognition and treatment at this stage may prevent serious damage.

Many names have been proposed for this syndrome by different authors. Some of the terms used include *coronary failure, coronary insufficiency, coronary occlusion without infarction, twig thrombosis, impending myocardial infarction, premonitory symptoms of infarction* and, the latest, *obliterative process outstripping the collateral circulation.* I prefer the term introduced by Graybiel, *the intermediate coronary syndrome.* In this entity, as in angina pectoris, the diagnosis must sometimes rest on the symptomatology.

HOW NOT TO DIAGNOSE CORONARY DISEASE

Having defined the terms, I want to discuss how *not* to diagnose coronary heart disease.

1. First of all, don't be a slave to the electrocardiograph. This fine instrument can be very helpful, but it is not a slot machine dispensing ready-made diagnoses. Tracings are most helpful in cases of acute infarction, but even here they can be misleading or uninformative. Certainly in angina and in the intermediate syndrome, the electrocardiogram may be negative in the face of serious disease. If my message to you were limited to only one sentence, I would say, "Don't take an electrocardiogram to 'rule out coronary disease.'" When the tracing gives you positive information, use it along with your other evidence, but when it is negative, disregard the tracing and make your diagnosis from a careful analysis of all the other evidence you can gather.

2. Second, don't expect the laboratory to make the diagnosis for you. Here again, in acute infarction the transaminase test and others may be helpful, if properly timed. But in angina and the intermediate syndrome, there are no laboratory tests that are diagnostic. Don't use the serum cholesterol level, for it is totally unreliable for this purpose.

3. Third, don't expect the x-ray to make your diagnosis. Although chest films are usually taken in studying the heart, and are properly so taken, the findings are of only indirect value in the diagnosis of coronary disease.

4. Fourth, don't let the patient make the diagnosis for you. What he calls "a pain the heart" is likely to be the result of nerve root irritation, and what he calls "indigestion," pressing up under the sternum and causing him to belch, may well be angina. Don't accept a diagnostic term from the patient. Insist, instead, on a clear description of the symptom so that you can evaluate it yourself.

5. Fifth, don't expect too much from the physical examination. In the severe acute infarct, you can see almost all the salient points in your first glance at the apprehensive, breathless, ashen patient covered with cold perspiration. In angina and the intermediate syndrome, you may find no abnormalities. It's only in Hollywood that the doctor can listen to the heart with his stethoscope while carrying on a brisk two-way conversation, and then declare, "Strongest heart I've heard in five years!" Auscultation has little to offer in the diagnosis of coronary disease.

6. Finally, don't set your thinking in rigid categories and expect human illnesses to conform. If you say that angina is felt behind the sternum, you will be right most of the time, but if you say that it *must* be retrosternal or it is not angina, you will miss it in a substantial percentage of patients in

whom the pain is felt near the apex of the heart, or perhaps only in the neck or only at the wrist. Remember that acute infarction can occur without a drop in blood pressure, sometimes without typical cardiographic changes, and sometimes even without pain. Keep your mind open, especially, to symptoms indicating the intermediate syndrome when it is evident that the coronary blood supply has become critically reduced, and don't let a normal or stable electrocardiogram lull you and prevent your making the proper diagnosis.

Think of coronary disease as a dynamic process, with coronary narrowing and the development of collateral channels proceeding at independent, variable rates. When the narrowing is greater, the severity will increase, but when the collateral channels are winning out, the symptoms will improve. That angina later disappears doesn't mean that you were wrong in diagnosing it when the characteristic symptoms were present.

HOW TO DIAGNOSE CORONARY DISEASE

How, then, should one diagnose coronary heart disease? In describing the clinical manifestations and in issuing warnings about what not to do, I see that I have already given the answer. In brief, then, coronary heart disease can be diagnosed by taking a careful history, thoughtfully evaluating the symptoms, and then adding any pertinent information that the electrocardiograph and the laboratory can offer. Incidentally, in your problem cases, send the patient rather than just the electrocardiogram to the consultant if you want the best results.

STRESS TESTS

Exercise tests, and sometimes anoxemia tests, have been used in the diagnosis of angina. They do have a place in the diagnostic study, but only a small one. Although they can help in some doubtful cases, they should not be used routinely. There are differences of opinion about the criteria for judging abnormalities. There is also a small risk involved, and it may become a considerable one if a stress test is performed during an unrecognized intermediate syndrome.

OTHER MANIFESTATIONS

Lack of space prevents my undertaking a full discussion of the other manifestations of coronary disease. For example, arrhythmias and congestive failure without other obvious cause, when seen in people beyond the age of 50, are commonly attributed to coronary heart disease, and such ascriptions probably are often correct. Whatever the etiology, however, the arrhythmia or the failure is ordinarily treated in a single fashion. A more vital problem is that of the abnormal electrocardiogram. Just as a normal electrocardiogram doesn't rule out coronary disease, so an abnormal one doesn't, by itself, prove coronary disease, the only exception being a highly specific one following an acute infarction. There are some Q-wave patterns which indicate old infarcts, but these may be mimicked by other conditions, and restraint should be exercised in making such a diagnosis without clinical support. But when one is dealing with non-specific changes such as S-T depressions, T-wave inversions, and A-V and bundle branch blocks, specific clinical diagnoses are not warranted at all. Although such changes could be due to coronary disease, any of them could be due to other causes, and some could be found in the absence of any heart disease. There is no justification for labelling such changes as "indicating coronary insufficiency" or even as "indicating myocardial damage." This advice is directed not so much to the practicing physician who is interpreting his own tracings, for his interpretation will probably be made in the light of his clinical findings, but to the consultant electrocardiographer who interprets the tracing "cold" and tries to be helpful by producing a specific diagnosis for the attending physician. I would urge the cardiographer to report these cases as "abnormal record showing non-specific changes," and let the attending physician decide whether the abnormalities are due to coronary disease.

DIFFERENTIAL DIAGNOSIS

Though it is important to search meticulously for clues that will identify coronary disease when it is present, it is equally important not to make such a diagnosis when it is unwarranted. Let no one think that I favor a loose attitude in diagnosing coronary disease. It would be difficult to say whether underdiagnosis or overdiagnosis is worse, for both are undesirable. So why not aim at maximum accuracy? As a matter of fact, the same care that is needed in eliciting a good angina history in one patient can find features in the next patient that will point away from angina and suggest some other specific diagnosis.

A complete review of the differential diagnosis would be impossible here, but the following are a few of the commoner conditions to consider:

1. *Cardiovascular.* Pericarditis, dissecting aneurysm, aortic valve disease, post-infarction syndrome, paroxysmal tachycardia
2. *Pulmonary.* Pulmonary embolism, pulmonary hypertension, pleurisy, pneumothorax, mediastinal emphysema
3. *Musculoskeletal.* Arthritis of the spine, thoracic-outlet syndromes, costochondral strain, Tietze's syndrome, tender xiphoid syndrome
4. *Gastrointestinal.* Hiatus hernia, cardiospasm, gallbladder disease, pancreatitis, splenic-flexure syndrome
5. *Neuropsychiatric.* Herniated discs causing nerve-root pain, neuritis, hyperventilation syndrome, psychoneurosis.

At this late stage in the paper, I would recom-

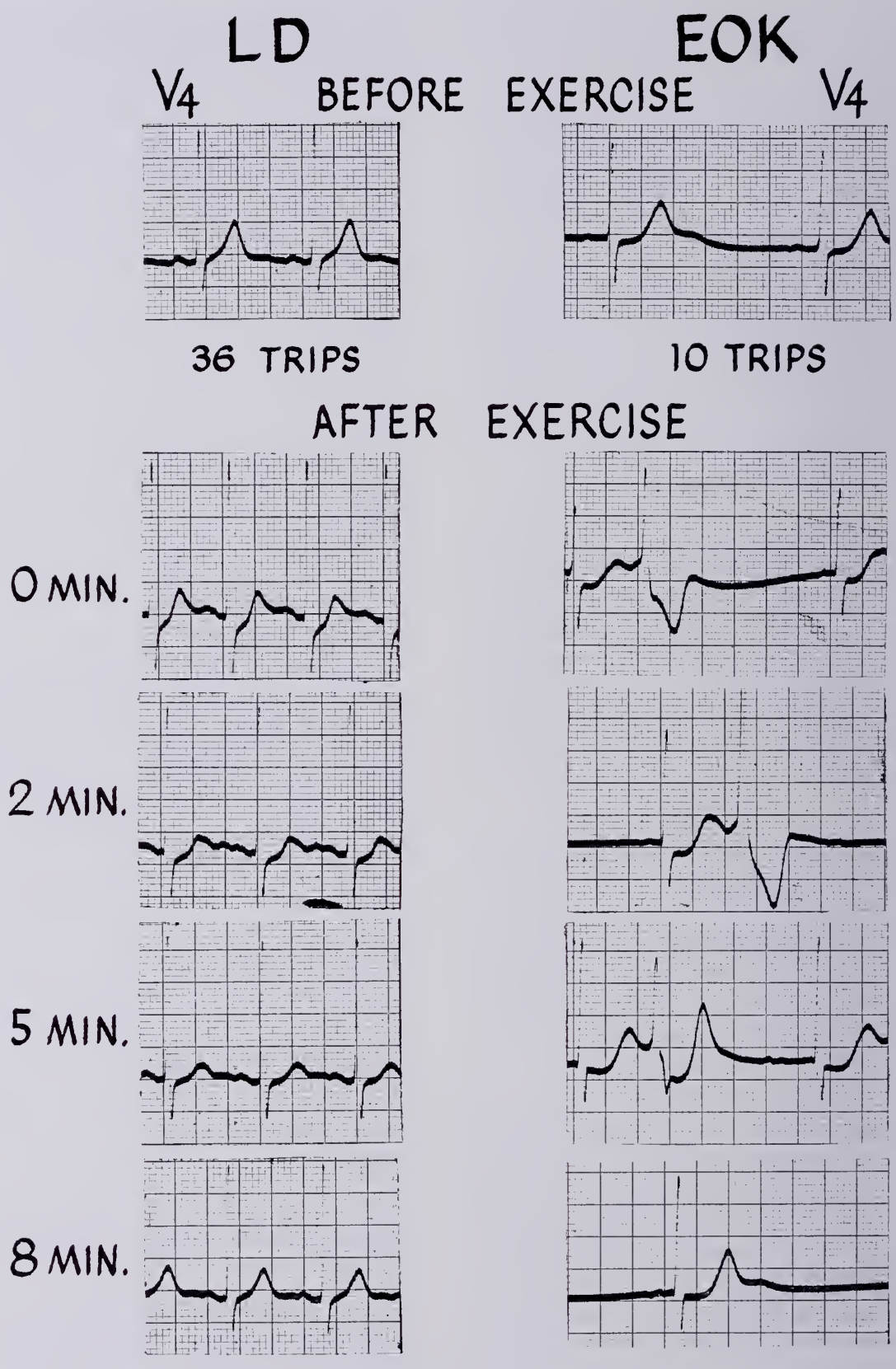


Figure 1. Double Master test in L. D. (Case 1). Master test stopped after 10 trips in E. O. K. (Case 2) because symptoms appeared.

mend that your diagnostic study include a complete physical examination, along with selected laboratory and x-ray studies. Though they are of little value in diagnosing coronary disease, these methods of examination may point to, or even specifically identify, one of these other conditions as the cause of the patient's symptoms. Incidentally, don't forget that coronary disease may coexist with any of these conditions, and a multiple diagnosis is not incongruous.

ILLUSTRATIVE CASES

Here are a few examples of coronary heart disease, showing some of the variations encountered.

1. Figure 1 (L. D.) contains the tracings of a 55-year-old man who was seen in 1953 and gave a typical history of angina on exertion. A double Master test reproduced his pain along with significant ST depressions in V_4. After a few months, his angina left and he has had none since.

2. Figure 1 (E. O. K.) reproduces the tracings of a 66-year-old man who had angina without pain. At a certain stage in his exertion he developed breathlessness, not pain. ST depressions developed in V_4, along with ventricular premature beats when he made 10 trips over the two-step platform, and he had to quit because his anginal variant appeared. Incidentally, his tolerance has also improved markedly. Now, his angina is rare, and he can perform much more work before it appears.

3. Figure 2 shows the electrocardiographic records of a man who had an acute infarct, relatively mild, at age 43. His tracings showed atypical but significant changes, and his transaminase series was 60-72-35. His attack started with pain in both

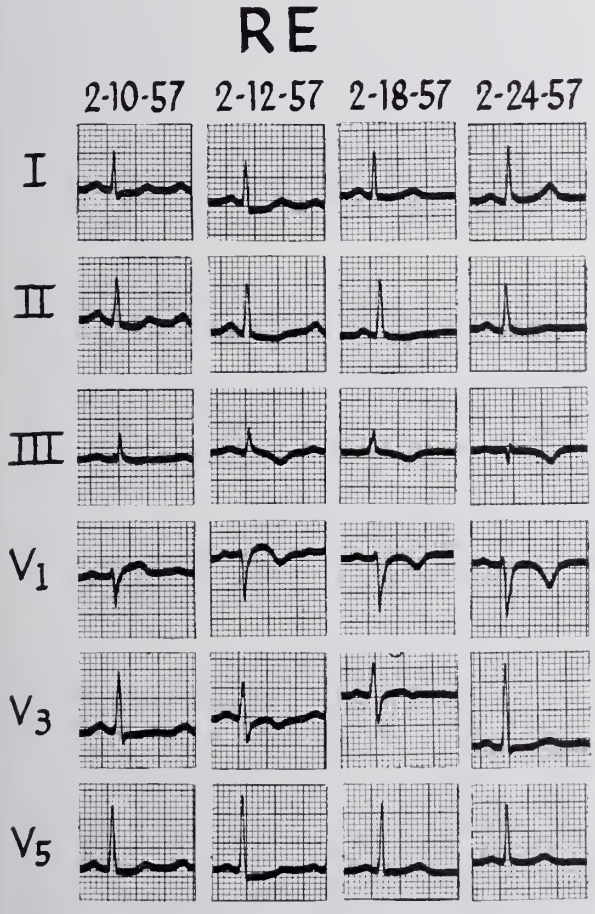


Figure 2. Atypical, but significant, changes with acute myocardial infarction in R. E. (Case 3). Pain of infarction and of subsequent angina is felt in forearms.

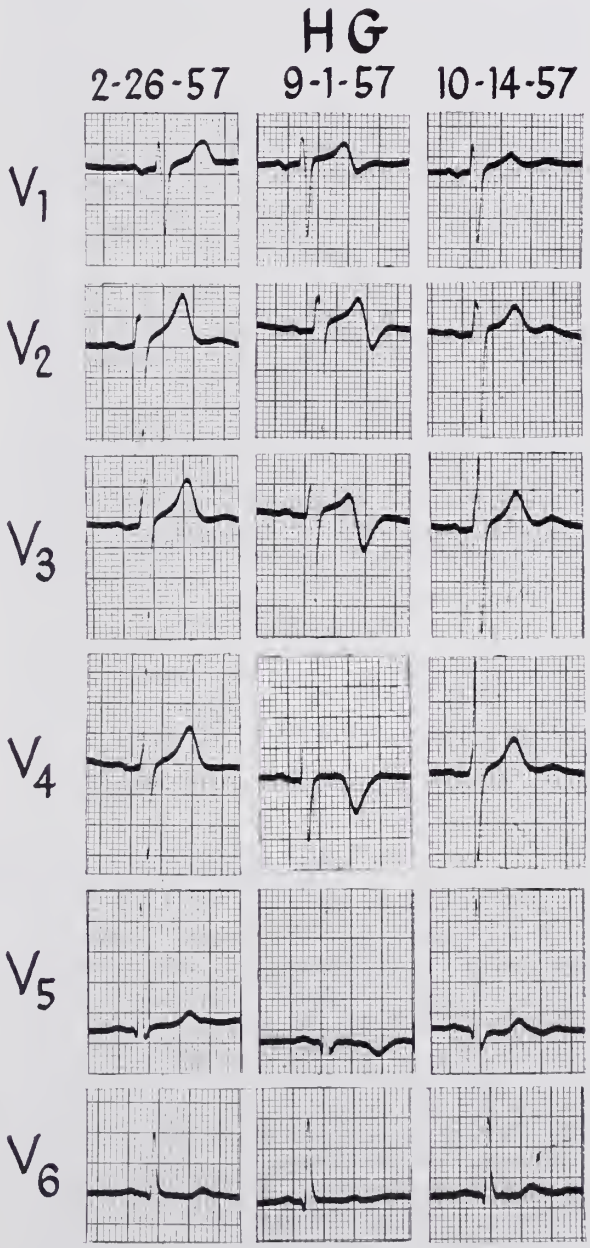


Figure 3. Intermediate coronary syndrome (impending myocardial infarction) on 9-1-'57 in H. G. (Case 4). There were T-wave changes in the chest leads, but no findings of infarction.

forearms at 10:00 a.m., and it was still present when he went to sleep that night. He awakened at midnight with severe pain in both forearms and mild chest pain, and was sent to the hospital. The pains were mild on the following day, and then left. Since his recovery, whenever he has angina he feels it in the forearms.

4. The records in Figure 3 are those of a 69-year-old man who had had an acute infarct five years earlier, and had been having angina on moderate exertion ever since. Then, one day, he began to have angina at frequent intervals and without obvious cause. There was associated sweating, and he was becoming quite apprehensive. I saw him after 24 hours of this, and found these new T-wave inversions in his chest leads. No Q-waves appeared, the transaminase remained level at 12-14-14, the accelerated angina receded, the T-waves reverted to their previous pattern, and infarction never developed. Many times, even the electrocardiogram will show no changes in this intermediate syndrome, and the diagnosis must then be made on clinical grounds.

5. The electrocardiograms in Figure 4 are those of a man (W. S.) who began having angina at 43 years of age, and for over a year had frequent attacks, sometimes brought on by exertion, but also occurring at rest. He died an hour after the onset of an attack of extremely severe pain. At autopsy, there was occlusion of all three main coronary arteries, and diffuse, patchy scarring in the left ventricle. His electrocardiogram, taken a few weeks prior to his death, is hardly distinguishable from that of a healthy young woman (B. J. S.) which is also reproduced in Figure 4.

SUMMARY

1. The diagnosis of coronary heart disease is made by the doctor, not by any machine.

2. Sometimes the diagnosis is obvious, but often it is not.

3. The most important factor in diagnosis is a carefully taken and thoughtfully evaluated history.

4. It is also important to be aware of the different ways in which coronary disease may manifest itself.

5. With proper restrictions, the electrocardiograph and the laboratory may sometimes be very helpful in the diagnosis.

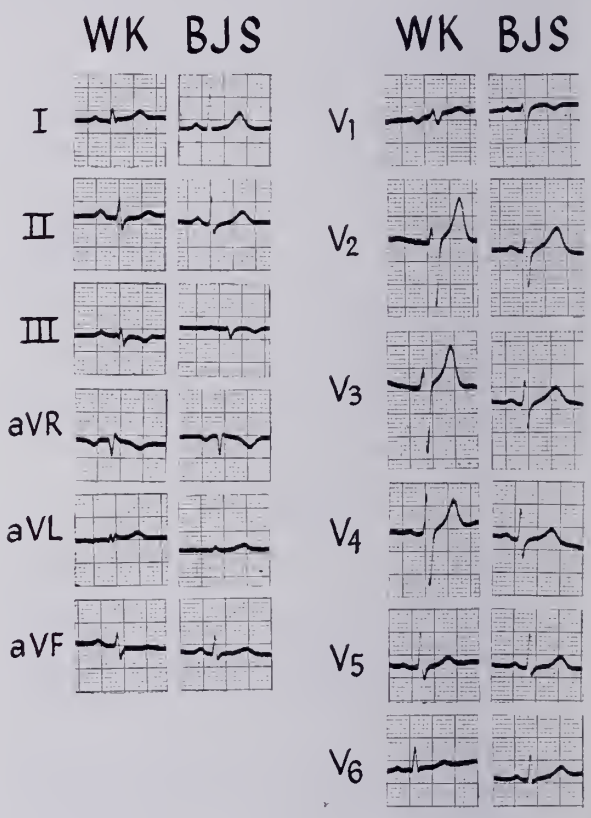


Figure 4. Close resemblance between tracing of W. K. (Case 5), who showed occlusion of all three main coronary arteries, and B. J. S., a healthy young woman.

Postgraduate Course In Lung Disease

On Friday afternoon, December 2, the S.U.I. Department of Internal Medicine and the Iowa Trudeau Society will cooperate in presenting a postgraduate course in lung disease at University Hospitals, Iowa City. All interested physicians are invited to attend it. The dinner at the new and attractive University Athletic Club, which will follow the meeting, will be open to those who attend and to their wives. Tickets for the dinner can be purchased at the registration desk, but there will be no charge for the scientific program.

This course has been approved for three hours of Category I credit by the Iowa Chapter of the American Academy of General Practice.

The program is as follows:

Moderator: Irving J. Hanssmann, M.D.
President, Iowa Thoracic Society

1:00 Registration
1:15 Introductory Remarks—William B. Bean, M.D.
1:20 Diagnosis and Recognition of the Patient with Alveolar Hypoventilation—George N. Bedell, M.D.
2:00 Treatment of Acute and Chronic Respiratory Insufficiency—William F. Miller, M.D.
2:50 Intermission
3:10 New Slants on an Old Tuberculosis Problem—Theodore L. Badger, M.D.
4:00 Panel: Allergy and Chronic Pulmonary Disease—Paul M. Seebohm, M.D., Lawrence J. Halpin, M.D., and Joel D. Teigland, M.D.
6:00 Social Hour and Dinner, University Athletic Club

II. Management of the Coronary Patient

L. E. JANUARY, M.D.

IOWA CITY

THE TITLE OF this symposium indicates that the whole body of knowledge about coronary artery disease will not be considered. I shall immediately constrict the scope of my discussion. It would be fatuous to include such things as nitroglycerin for angina pectoris, or the control of pain, shock, arrhythmias and cardiac failure in acute myocardial infarction. Neither should there be any need to dwell upon the dosage of drugs. These and many other facts are well known to you, or are easily available.

On the other hand, there are a number of modern concepts which have a bearing on coronary artery disease today and Doctor Stare and I agreed, in a telephone conversation, to divide them up between us. My purpose shall be mainly to call attention to some aspects of anticoagulant therapy, reserving space at the end to mention fibrinolytic agents, surgery and the thyroid drugs, a return to work after myocardial infarction, and the role of stress. It will be clear where these matters overlap either the acute or the chronic phases of the disease. Doctor Stare, then, will be free to criticize you for your choice of ancestors, for your intemperate habits, for your physical indolence, and for your riotous living and gluttonous eating.

ANTICOAGULANT THERAPY

Anticoagulant drugs have an established place in the treatment of acute myocardial infarction. Russek and associates[1] early called attention to the fact that those patients with minor infarcts do well without these drugs. Even so, I haven't found it invariably easy to classify patients as "good" and as "poor risks" immediately, and it is axiomatic that anticoagulant drugs should be started early for maximum benefit. Hence, if there is any doubt at all about the significance of the myocardial infarct, I cast my lot with these drugs unless there are clear contraindications to their use.

There are several absolute contraindications to therapy. The increased hazard from hemorrhage is obvious when active peptic ulcers, known gastrointestinal, genitourinary or pulmonary malignancies, or blood dyscrasias exist. There are some relative contraindications, as well. Anticoagulant drugs have an augmented sensitivity when renal insufficiency and hepatic disease are present. Control often is difficult in the extremely debilitated patient, and there is a possible danger of serious bleeding should patients with bacterial endocarditis embolize. These drugs, then, must be used with extreme caution and with an appreciation of the possible consequences when these relative contraindications exist in a patient with acute myocardial infarction.

To go a step further, patients on low-fat diets possibly are more sensitive to anticoagulant drugs than are those on normal diets. Also it seems quite clear that there is an increased sensitivity to these drugs in patients who are receiving sulfonamide preparations or broad-spectrum antibiotics, particularly, because the population of vitamin-K producing organisms in the intestine is diminished.

When anticoagulant drugs are properly used, in properly selected patients with acute myocardial infarction, one can anticipate a one-third to one-half reduction in the death rate, mainly from fewer thromboembolic complications rather than from a primary effect on the coronary artery lesion.

Long-term, continuous use of anticoagulant drugs to retard or to prevent thrombosis within atherosclerotic coronary arteries is another major therapeutic effort. The final proof of the feasibility and the value of committing patients with angina pectoris or those who have survived myocardial infarction to such a life-long program is as yet lacking, but there is more and more evidence to suggest that survival is significantly lengthened because of a reduced incidence of coronary thrombosis. A recent report,[2] for example, indicates that the mortality in a group of anticoagulant-treated patients was only half of that in groups not so treated.

Little is to be gained from further speculation on the efficacy of this type of therapy. Instead, simply let me say that it is possible to treat patients this way, and the plan may well have merit in preventing thrombotic episodes in both the coronary and the cerebral arterial beds. But here I should like to emphasize a matter about which I feel very strongly. The physician who elects to institute permanent anticoagulant therapy commits himself and his patient to a serious responsibility. Both must be prepared to walk the fine line between bleeding, on the one hand, and escape from the effects of the drug, on the other. Overdosage and poor laboratory control may result in alarming or even fatal hemorrhage, whereas underdosage and poor laboratory control are worse than nothing at all. I have never found this therapy particularly easy, and patients have never found it cheap. Even so, it is a rational approach to therapy when meticulously practiced, and anything

less than meticulousness is to be severely condemned.

COUMARIN

The choice of anticoagulant drugs for either short- or long-term therapy is, for all practical purposes, limited to heparin, the coumarin compounds and the phenylindanedione series of drugs. The latter, although chemically different, depress the same factors as do the coumarin compounds.

My own experience has been with the coumarin compounds. The coumarin drugs act by depressing several clotting factors in addition to prothrombin. Table 1 is a simplified diagram of the blood-clotting mechanism. The clotting factors depressed by coumarin drugs are underlined. In the first stage of clotting, several thromboplastin factors, plus factors IX and X, react to form thromboplastin. Prothrombin is converted to thrombin in the second stage, where it is accelerated by factors VII and X, among others. Thrombin then acts upon fibrinogen to form the fibrin clot. The coumarin drugs do not affect this step, nor do they interfere with platelet agglutination. These drugs act in this system by depressing hepatic production of some of the factors that are instrumental in the production of thromboplastin. Thus it is that time is required to secure a therapeutic effect, on the one hand, and to correct an overdosage on the other.

The dosage of the coumarin drugs is regulated almost universally, today, by a one-stage method for determining the prothrombin time. Yet, other factors also are depressed. Hence, the prothrombin time, however reliably determined, is no more than a rough approximation of the activity of the coumarin drugs. The one-stage method measures the deficiency of three out of four of the factors indicated, but still not with the same efficiency. Actually, the test is more sensitive to a deficiency of factor VII than it is to prothrombin, and it does not measure a deficiency of factor IX at all. Thus it is that patients, even under meticulous laboratory control, sometimes bleed despite the fact that the prothrombin time has been found to be within the therapeutic range of between two and three times the control value. Hence, all of this emphasis upon proper laboratory control.

For safety, it has become my custom to be satisfied with no more, or slightly less than twice the control time in long-term therapy. The longer prothrombin times probably are safe for short-term therapy when patients are under observation in the hospital, where if hemorrhage occurs it can be readily recognized and treated. Research is in progress by numerous investigators to develop a more satisfactory and, at the same time, a simple laboratory test for gauging the dosage of these drugs.

HEPARIN

Heparin, on the other hand, acts upon all phases of blood coagulation, and consequently it is a more nearly ideal anticoagulant drug. It acts immediately. It acts to prevent the progression of the various stages of the clotting mechanism. It does not depress the circulating blood levels of any of the clotting factors. It rarely causes hemorrhage, and overdosage can be rapidly corrected by protamine. The laboratory control by the Lee-White method is satisfactory. Also, heparin has a so-called "clearing factor" action, whereby it triggers the release of an enzyme which potentiates the removal of large chylomicrons from the blood stream. This may be additionally valuable if these large fat particles do, in fact, play a role in atherogenesis.

Heparin has two definite drawbacks. It is expensive, and it must be administered frequently by the parenteral route. I know of no proof whatsoever, as yet, that it has any worthwhile clearing-factor action when it has been administered any other way than parenterally.

I have said nothing about the dosages of particular drugs for the reason I gave at the start, but I want to say a word about the timing of the treatment. It is essential that anticoagulant therapy for acute myocardial infarction be continued for at least three to four weeks. Intracardiac mural thrombosis begins in about three days after a myocardial infarction, and ideally, then, anticoagulant drugs should be begun before this time

TABLE 1.

SIMPLIFIED SCHEME OF BLOOD CLOTTING MECHANISM*

Stage 1.	Factor IX (PTC) Factor X (Stuart-Prower) Other Thromboplastin Factors	——→	THROMBOPLASTIN
Stage 2.	Prothrombin + Thromboplastin	Factors VII + X ——→ Factor V, Ca^{++}	THROMBIN
Stage 3.	Fibrinogen	Thrombin ——→	FIBRIN

* Factors depressed by coumarin are underlined.

or by this time. Usually, heparin is started immediately because of its prompt action, and it is continued until an oral preparation has become active, but there is no reason why, if the physician chooses, heparin cannot be used throughout the whole period as the single anticoagulant drug.

A similar regimen is advisable when the premonitory symptoms of coronary occlusion or of the intermediate coronary syndrome, as Doctor Weinberg has called it, serves as the indication for anticoagulant therapy.

FIBRINOLYTIC AGENTS

The fibrinolytic system is under active study today to see whether methods can be found for the effective lysis of intravascular clots. It is the view of some that if a coronary-artery thrombus could be quickly dissolved, the resulting myocardial necrosis would be lessened or even prevented. The current suspicion is that there is an active fibrinolytic system in the human being to prevent thrombotic episodes from becoming significant to any great extent. This is a complex mechanism, and current experimental therapy seeks to activate certain stages in this system, and thus promote lysis of a thrombus that has occurred in spite of the protective process. Agents such as trypsin, plasmin, urokinase and streptokinase have been used. The truth of the matter is that no agent has proved ideal, and this type of therapy has no practical place in the management of coronary disease at this time. There simply is no safe, effective preparation which is commercially available.

SURGERY

Surgery for coronary artery disease has been designed to accomplish a number of things. None of the approaches are of such proven value as to merit routine application. Upper dorsal sympathectomy, particularly as described by Palumbo,[3] can offer relief from the pain of otherwise uncontrollable angina pectoris. Ligation of the internal mammary arteries as a stimulus for extracardiac coronary arterial anastomosis is of no value whatsoever. Coronary artery endarterectomy as a direct attack on the problem is completely experimental and likely to remain so for some time, at least.

The results of surface revascularization by graft or by low-grade adhesive pericarditis, as advocated particularly by Beck[4] and others, have not been generally impressive. Finally, a few large myocardial aneurysms have been successfully removed. But here the matter pretty much rests, for the moment, and it seems to me that there is less emphasis on surgical therapy today than there was even just a few years ago.

HYPOTHYROIDISM

Hypothyroidism, induced first by thyroidectomy, later by the thiourea drugs and now by radioactive iodine, has a minor place in the control of intractable angina pectoris. Experience suggests to me that the results will be truly impressive in only a small per cent of patients who are euthyroid to begin with. The results may be truly brilliant when a patient has thyrotoxicosis. Certainly the ultimate goal in coronary disease must be something better than the adding on of another disease which in itself has serious complications. I believe that reversible hypothyroidism should be induced by antithyroid drugs first, and maintained for a trial period to observe the effect on the angina pectoris, on the one hand, and the patient's tolerance of the hypometabolic state, on the other. In this way, therapy can be abandoned if it is unsuitable, or later made more or less permanent with radioactive iodine, if indicated.

REHABILITATION

A few remarks on rehabilitation are in order. Plans should be made for the rehabilitation of patients almost as soon as it is obvious that they will survive acute myocardial infarction. And, incidentally, the mortality from first attacks is probably no more than 10 per cent. Myocardial infarcts, depending on their size and depth, heal in from three to seven weeks, and hence it is possible to carry prolonged bed rest and inactivity to the point of absurdity. Rest, after myocardial infarction, is paramount to the therapy, but there need be no inflexible routine. In fact, cardiac work may even be less with chair rest than with complete bed rest. Certainly the spirit will be lifted along with the man when he is allowed out of bed early, thus breaking the chain of a gloomy medical and nursing ritual which most patients must regard as calculated to spell their doom.

This modest break with tradition does not imply an unwise early ambulation. Activity comes *after* the infarct has healed, but from here on, the dominant concept must be that exercise and work within the tolerance of the recovered patient is beneficial to the heart, to the emotional state and even to the level of serum cholesterol.

The energy requirement for much of the industrial and agricultural work in this country today falls within the ranges which are suitable for most functional class II and class III cardiac patients. Or if not, particular jobs often can be modified to reduce the energy requirement. In some areas of the country, work classification units exist to offer help in the occupational placement of cardiac patients. Very likely, here in Iowa we need to develop these units, and to refine and expand our approach to helping agricultural workers in strictly rural areas.[5]

This shift to an emphasis on what a patient *can* do, rather than magnifying his limitations, imposes a further responsibility on the practicing physician. There may be no need for him to become a specialist in ergometry, but it is helpful for him to know that many housekeeping activities and minor recreational pursuits require a far greater energy expenditure than do any number of assembly-line

jobs, and that the energy requirement for a Master's two-step exercise test is so great that it falls within the ranges of peak effort required by farm-chore work. There never has been a reason for restricting the activity of the patient with chronic heart disease much beyond the point of controlling symptoms. Today, it is often possible for a work prescription to be stripped of vagueness and to take on specific meaning.

STRESS

Finally, regarding stress. There is no question that stress, whether it be physical, emotional or physiologic, can lead to symptoms in the patient with coronary artery disease. Undoubtedly, it is wise to modify or stop a particular stress, or attempt to change the individual's reaction to it, when symptoms arise. On the other hand, it seems to me quite a different matter to relate the rising incidence of coronary disease to stress, and whatever hormonal or other biochemical changes are triggered by it. We are indeed egotistical if we think our stresses today are greater than those of people who lived during other periods of history. They are different, to be sure, but it cannot be easily shown that the modern tensions of cold war, satellites in orbit, high taxes, television fixes, farm surpluses, emancipation of women and all the other accoutrements of life in this century are more stressful than were the conditions faced by people in other eras. There must be more profitable lines of speculation and research than the investigating of the effect of stress, in our hope for an escape from coronary artery disease. I think Doctor Stare has information for us in this area.

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III. Is There an Escape From Coronary Artery Disease?

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MAY I SAY at the outset that it was not I who selected the title of my paper, but the more I think about the title, the better I like it. It is a provocative question, and I should like to answer it without any weasel words—in fact with the one clear simple word "Yes."

I do feel that there definitely is an escape from coronary artery disease. For many, the ailment may be postponed until I don't know when—the middle 70's, perhaps even the 80's.

Coronary artery disease is rare in many parts of the world, and even among our 50 states, deaths from coronary disease vary by nearly 100 per cent. Let me take an example from south of the border. Out of 234 autopsy specimens from rural Guatemalan males between the ages of 40 and 60, our laboratory in a cooperative study with the Institute of Nutrition of Central America and Panama found only one case of fatal myocardial infarction. A comparative series of 316 specimens from low-income whites in New Orleans showed 51 cases of fatal myocardial infarction. For some reason or, more probably, some set of reasons, most rural Guatemalan males have an escape from coronary artery disease.

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ANIMAL EXPERIMENTS

In the past 10 years, experimentalists in many laboratories have succeeded in producing atherosclerosis, the basic underlying pathology in coronary artery disease, in several species of animals, including monkeys. Monkeys are primates, and you and I are primates. This experimental atherosclerosis has been produced only following an increase in the level of cholesterol in the serum. Cholesterol levels in experimental animals can be readily changed through manipulation of the diet. One can increase the level by dietary means, and then decrease it by dietary means.

Monkeys have cholesterol levels that range somewhere between 150 and 200 mg. per cent. It was possible for us to manipulate the levels, first up to about 600 and then down again to about 250 mg. per cent. Now the thing that produced those changes in serum cholesterol, in some of our experiments, was not a diminution of the fat content of the diet, but a change in the protein content. We also added cholesterol to the feedings, and you may

well ask why we did so. We had two reasons. One of them is that we were trying to produce a change —to find something that might develop atherosclerosis. The other is that you and I have cholesterol in our diets, too. The protein in the diet of which I am speaking was markedly reduced and of inferior quality—inferior in that it was low in the sulfur-amino acids. The reduction in the monkeys' cholesterol level, after it had been hiked to 600 mg. per cent, was accomplished through an improvement in the quality and quantity of protein. The amount of cholesterol in the diet was kept exactly the same.

Also, we could markedly influence the cholesterol by manipulating the fat content in the diet. We fed some of our monkeys corn oil, as a part of their diet, and we fed others of them lard as the only fatty constituent. After 40 days, the "lard" animals had cholesterol levels in the range of 450-500, and the "corn oil" animals had cholesterol levels of about 300 mg. per cent. Then the fats were switched—those that had been the "lard" animals receiving corn oil, and *vice versa*—with the result that the cholesterol levels rose in those receiving lard, and fell in those getting corn oil. The only factor that was manipulated in this study was the type of fat in the animals' diet, but the cholesterol levels certainly were affected.

When monkeys were autopsied after having had elevations of serum cholesterol up to 400 or 500 mg. per cent over a period of 10, 12 or 14 weeks, one could practically always find that rather extensive atherosclerosis had developed. It was to be found at the opening to the right coronary artery. Indeed, that orifice was sometimes almost half occluded. The same atheromatous plaque formation was to be found at the opening to the left coronary artery and elsewhere.

Now, I stress the importance of various dietary factors in influencing serum cholesterol because, to my knowledge, atherosclerosis has been produced experimentally in a half-dozen different species, first in the rabbit, then in the dog, in the chicken, in the rat, in the hamster, in the guinea pig and in the monkey. But it has been produced in these species only when it has been possible, by some experimental means, to effect an elevation of serum cholesterol.

STUDIES IN HUMAN BEINGS

In a study that we reported about four years ago in the AMERICAN JOURNAL OF MEDICINE, we computed the average cholesterol value for almost 2,000 healthy men who had no evidence of cardiovascular disease, and we also found the average serum cholesterol level for a group of 273 men who had had definite myocardial infarctions. The latter figure was considerably higher. An elevation in serum cholesterol seems especially significant in persons who haven't yet reached the 55-60 year age range. We had somewhat over 300 well men at age 45, whose cholesterol levels averaged around 240, and we had approximately 70 individuals in that age category who had had infarctions and whose cholesterol levels averaged about 280 mg. per cent.

Now what influences the serum cholesterol level in you and in me? One of the things, and in our opinion perhaps the most important, is not necessarily the type of fat in the diet, or the type of carbohydrate in the diet, but rather the total caloric intake, though there are some experimental studies indicating that the type of carbohydrate is important, and conceivably just as important as the type of fat.

A man on whom we did an intensive study showed us how it is possible to influence the serum cholesterol when there is a marked gain in weight, even though that increase comes purely from an excess of sucrose. This gentleman, 27 years of age, started out with a diet intake of 3,000 calories per day. During the first month of a three-month study, his serum cholesterol level was 125 mg. per cent, and he maintained his body weight on a diet of 3,000 calories. At the start of the second month, we increased his dietary intake by 2,000 calories, so that the total was 5,000. The extra 2,000 calories consisted exclusively of sucrose. It was a highly artificial diet, and in order to ingest those additional calories he had to drink such things as Karo syrup and soft drinks with a great deal of added sugar. The diet was also highly artificial in that it was exceedingly low in fat (less than 15 Gm./day) and exceedingly low in cholesterol (less than 50 mg.). During this second period, with the extra 2,000 calories per day, he gained 11 lbs., and his cholesterol level went up to 200 mg. per cent. For the third single-month period, we put him back on 3,000 calories. He lost 8 lbs., and his cholesterol decreased, though not to its former level.

When we had completed this study, we wondered what would have happened if, by means of forced exercise, we could have prevented the subject's weight gain. In other words, if he had burned up those extra calories by hard physical work, would his serum cholesterol have increased all the same? When we undertook to find the answer to this further question, however, we made a change in the diet. We decided to "load" the experiment in favor of the development of cholesterol, and thus made the diet very high in fats by increasing the fat constituent to 175 Gm., and the cholesterol to 2,000 mg.

During the first month-long period, again, we gave our subject 3,000 calories per day and required no unusual exercise of him. His weight was 196 lbs., and his cholesterol was 155 mg. per cent. During the second period, we got him to consume over 6,000 calories per day. But with about seven or eight hours of very hard exercise per day, he picked up only 4 lbs. of weight, despite his tremendous caloric intake, and there was no appreciable change in his serum cholesterol level (165 as against 155 mg. per cent). But during the third period, without the forced exercise, he just couldn't

consume 6,000 calories per day, though he came close to it (5,400 calories), and during this single month he gained 14 lbs., or almost a half-pound of weight per day, and showed an increase in cholesterol level to 275 mg. per cent. In the last period, when we decreased his diet to 2,300 calories, he lost 8 lbs., and his cholesterol was on the way down.

DIETS TO KEEP SERUM CHOLESTEROL LOW

I think these experiments illustrate that for some individuals a rapid gain in weight is accompanied by a rise in cholesterol. And almost regardless of the content of the diet—i.e., how much fat is in it—if one does not gain weight, either by keeping the caloric intake low or by burning up the extra calories through exercise, the chances of a rise in the serum cholesterol level are rather slight.

Now, I should like to run through some diets with you, calling your attention to their respective caloric contents. We get somewhere in the neighborhood of 40 per cent of our calories from fats in a typical American diet. Of that 40 per cent, a little less than half—around 18 per cent of the total caloric content—comes from what we speak of as the saturated fatty acids, which for all practical purposes are the dairy fats. About the same share —18 or 19 per cent of the total caloric intake—comes from what we speak of as the mono-unsaturated fats, which for all practical purposes are the meat fats, shortenings and margarines. And somewhere around four to five per cent of our calories come from what we speak of as the polyunsaturated fats—salad dressings containing corn oil, cottonseed oil or soybean oil.

As the result of a great deal of experimentation and some clinical studies during the past 10 years, a number of workers in this field seem to think that it is a desirable thing for the American public to reduce, modestly, its consumption of fat. Now there is considerable difference between reducing the fat and eliminating it. It is ridiculous to talk about completely eliminating fat from the diet, and I think it is equally ridiculous to talk about cutting the fat constituent in half, for if dietary regulations are to be any good, they must be ones that people conceivably can follow and follow willingly. But a reduction of total fat by about 25 per cent, so that somewhere around 30 per cent of our total calories came from fats, would constitute a modest reduction.

It has also been shown, and I think quite clearly, that a modest increase in the polyunsaturated fats is a desirable thing because cholesterol, as it esterifies in the blood—preferentially with the unsaturated fatty acids and particularly with linoleic acid—seems to be transported more efficiently, and less of it piles up in atheromatous plaques.

If one is going to reduce the total fats by 25 per cent, or so that somewhere around 30 per cent of the total calories come from fat, rather than 40 per cent, *and* if he is going to double the amount of the polyunsaturated fats from four or five per cent up to eight or 10 per cent, either the completely saturated fats (the dairy fats) or the mono-unsaturated fats (the meat fats) must be considerably reduced. Now if we reduce the fat content in the diet by 25 per cent and try to double the poly-unsaturated fats, we suggest that it is the dairy fats that have to give. Meat in general is a more popular item in the diet of most adult Americans. Furthermore, it is readily possible, though not legal, to change the fat in milk and thus have milk an important contributor of polyunsaturated fats. But laws can be changed.

If I may put these recommended changes in terms of a typical menu, in a total of 2,600 calories, 30 per cent of which come from fats, and with the amount of polyunsaturated fatty acids doubled, one can have a breakfast which is perfectly adequate—fruit, cereal and skim milk on the cereal. Many people don't like the taste of skim milk, but sooner or later the dairies will realize that if they simply increase the amount of milk solids, they can have a milk which tastes, looks and, if I may use the expression, feels like whole milk, and really is an excellent product. One can also have an egg on the same morning that he has cereal, and he can have a couple of pieces of toast, and coffee with sugar. The only real difference between such a breakfast and the one that most of you had just this morning is, perhaps, that it includes one egg rather than two eggs. Another difference may be that there is, of course, no bacon, ham or sausage accompanying the egg. This omission has been made purely because of calories.

For lunch, according to this typical menu, one can have some kind of soup, a chicken sandwich, fruit, and coffee, tea, or skim milk.

For dinner, again we have tried to make our recommendations more or less realistic for the majority of individuals. Many people like to have a cocktail or two, and that's perfectly all right as far as I am concerned, as long as they are aware of the fact that there are seven calories per gram in the alcohol. But returning to the meal itself, we say that three ounces of beef is enough. The size of steak that I am sure a number of restaurants in Des Moines advertise would considerably exceed that limitation, but three ounces of beef is about what one gets on a United Airlines flight, and I have yet to find people who, if the food served them on a plane has been well prepared, feel hungry after eating it. The quantity of food consumption is largely a matter of habit. The evening meal may include potatoes, vegetable, salad, pie if one wishes it, and coffee, and in the evening if one wants to have a bottle of beer and some pretzels, it's perfectly all right as long as he realizes that both contain calories. I think that probably the most important thing about these menu suggestions, and one that many of us should keep in mind, is the total figure of 2,600 calories per day.

These dietary suggestions that I have made can probably be summarized in just a sentence or two. I think it probably is a desirable thing, and one that fits into the experimental as well as the epidemiologic pattern of finding an escape from coronary disease, for us and our patients to reduce our

intake of calories coming from fat, at least moderately. In general terms, this means a decrease, modestly, in meats, drastically in whole milk and milk products containing fat, a decrease in eggs though not the elimination of them from the diet, a decrease in some kind of table spread, and a decrease in pastries made with shortenings such as lard. At the same time it means an increase in fish and poultry, in skim milk, in cereals, and in pastries made with cottonseed, soybean, or corn oil, or margarines or shortenings made so that they contribute effectively to our intake of polyunsaturated fats.

OTHER STEPS WE CAN TAKE

There are at least half a dozen factors known to affect coronary artery disease in man, or known to be associated with it. We can do something about five of these six factors, and so can your patients, if they have sufficient motivation. These half dozen factors are heredity, overweight, elevated serum cholesterol, increased diastolic blood pressure, cigarette smoking and exercise.

Well, we can do something about numbers two, three, four and five in my list of factors, and we can do something about physical activity, too, if we are sufficiently concerned about the problem. I think that perhaps the single most important thing for us to realize about these various factors is that they are additive. That is, if you or a patient happens to have a strong cardiovascular history in the family, if such an individual is overweight, if he has an elevation of serum cholesterol, if he has had a little rise in diastolic pressure, if he is a heavy cigarette smoker and if his habits are sedentary, he is especially likely to contract coronary heart disease at an early age. All of these things seem to add up.

On the other hand, if one comes from a family in which the parents have lived into their seventies, let us say, or even into their eighties, if he is of average weight, if his cholesterol is more or less normal, and if his blood pressure is normal, it probably doesn't make a bit of difference if he smokes one or two packs of cigarettes a day. If one has two or three of these factors, it's worse than if he had only one, but it's not so bad as if he had all six.

The dietary or nutritional factors associated with the level of serum cholesterol in the blood include total caloric intake, quantity of fat and type of fat. In general, I think most of you and most of your patients would benefit from modestly decreasing your respective total caloric intakes, and modestly decreasing your total fat intake is one of the easiest ways of doing this, since fats provide more than twice as many calories per unit of weight as do carbohydrate or protein. Also, your salt intake must be drastically reduced.

Dr. January has had something to say about stress and strain in relation to coronary artery disease. I know that it is a common feeling among clinicians that strain may be one of the causes of the disease. On the other hand, from the experimentalist's viewpoint, I just don't know of anything that I would accept as good evidence showing that stress and strain are important factors. In the first place, stress and strain are very difficult to evaluate. They vary from individual to individual. What is stressful to you is not stressful to me, and *vice versa*. There is reasonably good evidence from a number of laboratories indicating that hard physical work lessens the chances of one's developing coronary artery disease. People who are active physically, within reason, are less likely to develop it than are people who are relatively sedentary.

The dietary changes that I have suggested are not faddist. No one is promising you freedom from coronary artery disease through these or any other dietary changes. But they are likely to help protect you from it. And the vegetable oils need not come from organically fertilized corn, cottonseed or soybeans!

A WORD ABOUT FLUORIDATION

The mere mention of food faddism reminds me of the fluoridation of public water supplies and the antifluoridationists, because the latter and the food faddists usually belong to the same club—the club of comic chemists or silly scientists.

You might ask, "Why does a nutritionist talk about fluoridation?" My reason is that it has been shown quite clearly within the last half-dozen years that fluorine is an essential trace mineral. One must have a small amount of fluorine in the diet—and water is included in the diet—in order to develop a dental enamel with maximum resistance to decay. Thus, fluorine has joined the ranks of about 15 other nutrients—zinc, manganese, silenium, magnesium, etc.—which are trace minerals.

Fluoridation is the best bargain in public health today. For 10 cents per person per year, in a half-dozen years, we can reduce the incidence of dental decay in young children by more than 50 per cent. And fluoridation is completely safe for all ages of either sex and in any state of health.

I don't know whether you in Iowa have been plagued by the organized minority of noisy bigots who oppose fluoridation, but I should guess that you have. If so, don't give up, for right always wins, and here is a clear-cut case where not only scientific issues but moral ones are involved, and right is on our side.

In conclusion, it is my clear-cut and unequivocal opinion, based on what I consider an abundance of sound scientific data—epidemiologic, experimental and chemical—that there *is* an escape from coronary artery disease.

The researches in this report that have emanated from the Department of Nutrition at Harvard have been done by numerous colleagues and students and have been supported in part by grants in aid from the National Heart Institute, the John A. Hartford Memorial Fund, the Albert and Mary Lasker Foundation, The Nutrition Foundation, and the Fund for Research and Teaching, Department of Nutrition, Harvard University.

A Five-Year Report on the Iowa Program for The

Prevention of Recurrences Of Rheumatic Fever

JOHN C. MACQUEEN, M.D., WILLIAM B. ANDERSON, M.D., AND
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IOWA CITY

IN THE RECENT PAST, rheumatic fever and rheumatic heart disease were major causes of physical handicap and death for individuals under 21 years of age. On rare occasions, acute rheumatic fever with carditis was the cause of death. More frequently, a patient had recurrent bouts of rheumatic carditis that resulted in severe rheumatic heart disease.

The use in cardiac clinics of prophylactic penicillin for patients with histories of rheumatic fever proved its value in reducing the number of streptococcal infections, and thereby in reducing the incidence of recurrent rheumatic disease.[1, 2]

In 1954, representatives of the Iowa State Medical Society, the Iowa State Department of Health, the Iowa Heart Association and the Iowa State Services for Crippled Children agreed that the Iowa State Services for Crippled Children would organize a state-wide program to provide prophylactic penicillin for the prevention of recurrences of rheumatic fever.

A state-wide prophylactic program is expensive, but it is easy to show that it is a wise investment. Until the advent of prophylactic programs, it was necessary to have various convalescent facilities for rheumatic fever patients. Many of the teenage patients presently enrolled in the Iowa program spent months in the rheumatic fever convalescent section of the S.U.I. Department of Pediatrics. The cost of medical care for one day in the hospital for a patient who has a recurrence of rheumatic fever would pay for his year's supply of prophylactic penicillin. The cost of medical care during the prolonged hospitalization of a patient or two with recurrent rheumatic fever would pay a major share of the cost of penicillin for the entire program. It is impossible to state or to appraise the social-economic loss of patients with cardiac invalidism caused by rheumatic heart disease.

This program is an activity of the Iowa State Crippled Children's Service. The authors of this report are members of the staff of the Department of Pediatrics at the S.U.I. College of Medicine. Dr. MacQueen is the director of the State Services for Crippled Children; Dr. Anderson is the assistant director; and Dr. Noonan is the pediatric cardiologist.

THE IOWA PROGRAM FOR THE PREVENTION OF RHEUMATIC FEVER

Patients who have had rheumatic fever or who have rheumatic heart disease may be enrolled in the program. The physician is requested to use as his guide in diagnosis the Jones criteria (modified) for the diagnosis of rheumatic fever.[3] The patient is enrolled in the program upon receipt by the Iowa Crippled Children's Service of a letter from the physician describing the illness in detail.

Upon enrollment in the program, the patient is sent a three-months' supply of penicillin tablets. At the end of each three-month period, the patient must again see his physician. The physician then reaffirms, by mail, the patient's need for prophylactic therapy, and another three-months' supply of penicillin is sent to the patient.

The program has adopted one of the prophylactic penicillin regimens suggested by the American Heart Association, and provides 200,000 units of penicillin per day.[4]

When the program was established, it was decided that the decision of the American Heart Association should be accepted, calling for the maintenance of prophylactic penicillin therapy continuously "until new knowledge makes this recommendation invalid."[5]

Because there is a need for more information about this relatively new form of prophylactic care, each child is requested to have a complete cardiac examination at a Crippled Children's Service mobile clinic or at the S.U.I. Department of Pediatrics. The information obtained during such an examination is recorded and is statistically reviewed to determine the effectiveness of the program. The program thus encourages the continuance of two important arrangements: (1) the patient is retained under the surveillance of his physician, who individualizes his medical care; and (2) the group of patients is followed by the Crippled Children's Service so that data may be collected and appraised.

ENROLLMENT

The accompanying map (Figure 1) indicates the widespread use of the program by Iowa physicians. Penicillin is provided for patients in two local cardiac clinics. These clinics are autonomous and provide their own programs of follow-up care. Therefore, the clinical data concerning their patients are not available and are not included in this report.

The number of patients that received penicillin during each of the program years is shown in Figure 2. The number of new patients enrolled in the program during each program year is shown in Figure 3.

When the program was started, many of the patients who were enrolled had established heart disease. This is a partial explanation of the fact that the numbers of patients enrolled during the first years of the program were large. This type of patient has been a less common enrollee during recent years.

PATIENTS WHO DROP OUT OF THE PROGRAM

In any health program, some patients either remove themselves or are removed from participation for various reasons. Table 1 lists the numbers of patients who dropped out of the program and the causes for their discontinuing prophylactic penicillin.

One of the common questions asked about such prophylactic programs is "How many patients must discontinue therapy because of allergic difficulties caused by penicillin?" It is of interest to note the small number of patients who have had any "allergic" symptoms. Most of the reported symptoms were mild, and no patient had severe symptoms related to penicillin therapy. This finding is in keeping with reports by other investigators.[6, 7]

TABLE 1

CAUSES FOR DISCONTINUING PENICILLIN

Cause	*Number of Patients*
Failure to request renewal; lack of interest	42
Becoming over-age	28
Moving out of the state	21
Diagnosis not established	10
Allergic symptoms	6
Death	2
Other	16

The largest group of patients who dropped out,

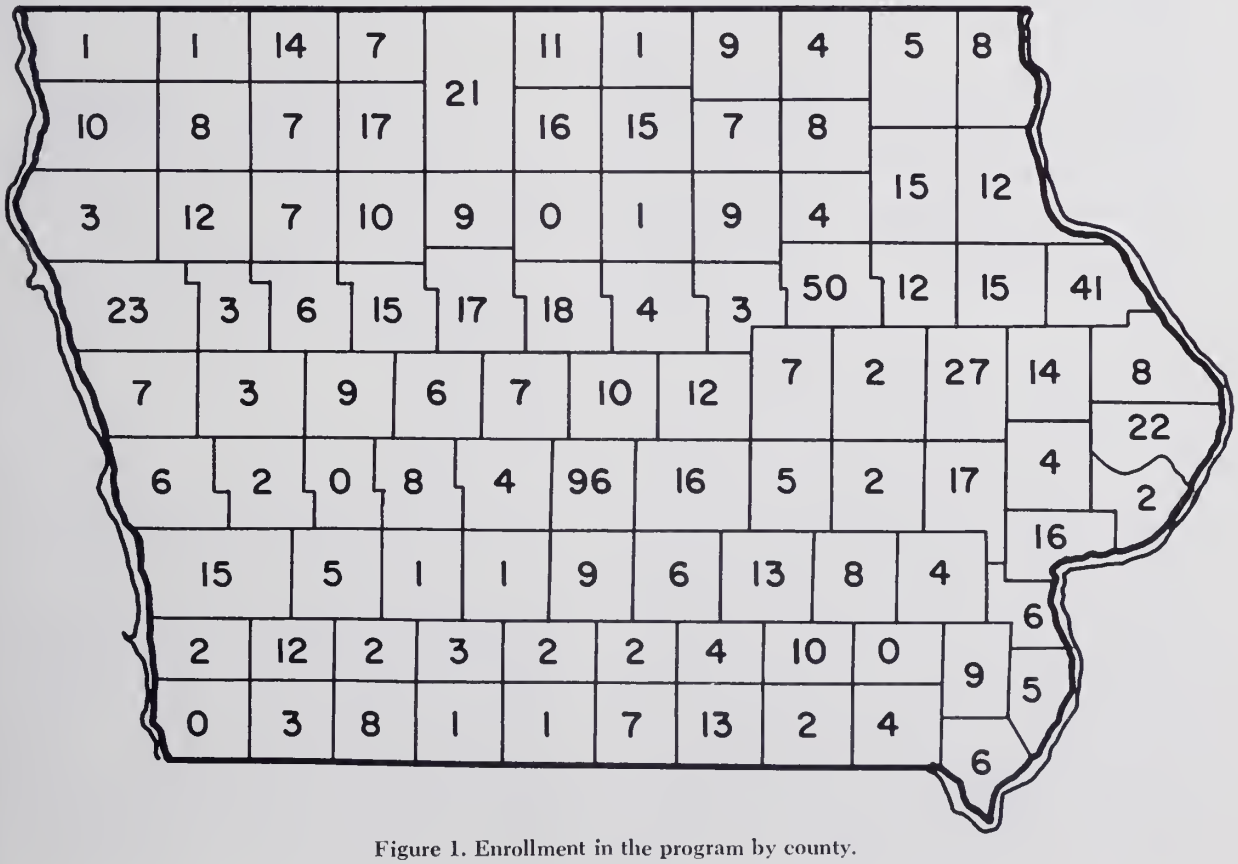


Figure 1. Enrollment in the program by county.

and the group that causes the greatest medical concern, are those who discontinued penicillin because they could not accept or understand their need for long-term prophylactic therapy. These individuals frequently drop out of the program after two or three years of therapy.

PATIENTS WITH RECURRENT DISEASE

The value of a health program must ultimately be shown by improvements in morbidity figures and mortality figures. Several clinical studies concerning rheumatic fever were completed prior to the institution of prophylactic programs. Those studies reported recurrence rates of 25 to 67 per cent among patients who had not received prophylactic therapy.[8, 9]

Table 2 lists the numbers of patients who had recurrences of their disease while enrolled in the program. The information about each of these patients and his illness was carefully reviewed. In the majority of cases, the patient's physician was personally interviewed so that the details of the illness might be learned before the episode was classified as a recurrence.

TABLE 2

RECURRENCES OF RHEUMATIC FEVER AMONG PATIENTS ENROLLED IN THE PROGRAM

9 patients while regularly taking penicillin had an episode of rheumatic fever without carditis.
7 patients while regularly taking penicillin had an episode of rheumatic fever with carditis.
2 patients while irregularly taking penicillin had an episode of rheumatic fever without carditis.
1 patient while irregularly taking penicillin had an episode of rheumatic fever with carditis.
1 patient while regularly taking penicillin had dental work without extra penicillin and had rheumatic fever without carditis.

It is of interest to note the severity of these recurrences. The majority of patients had no evidence of rheumatic carditis. This type of illness occurred almost without exception among patients who had no history of carditis. Of the patients who had evidence of rheumatic carditis with this recurrence, only three required prolonged hospitalization and supportive therapy for cardiac failure. All of these patients have histories of having had carditis with their original illnesses.

Table 3 shows the recurrence rates of rheumatic fever before and after prophylaxis, for the patients enrolled in the program. The table shows the improved health picture that occurs when patients who have had rheumatic fever or rheumatic heart disease take prophylactic penicillin.

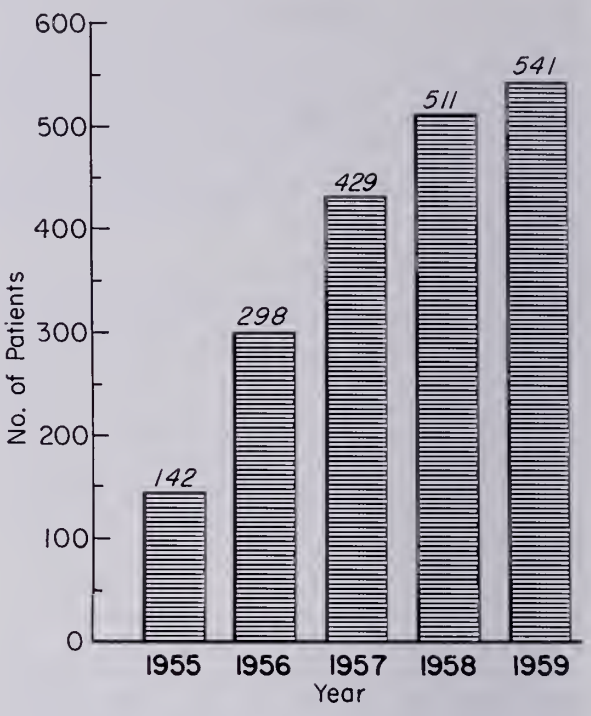


Figure 2. Patients receiving penicillin, 1955-1959.

TABLE 3

RECURRENCES BEFORE AND AFTER PROPHYLAXIS

	Onset of Disease to Beginning of Prophylaxis	*Beginning of Prophylaxis to End of Study (1960)*
Patients	630	630
Patient Years	1,240	1,667
Recurrences	203	22
	(141 patients)	(20 patients)
Per cent of patients having recurrence	22.4	3.2
Number of recurrences per 100 patient years	16.4	1.3

As a further test of the effectiveness of prophylactic therapy, the 141 patients were selected who, prior to enrollment in the program, had had one or more recurrences of rheumatic fever. This group, by general standards, would be expected to be particularly susceptible to recurrent rheumatic disease. Table 4 shows that even among these patients prophylaxis is effective.

It is unlikely that penicillin alone was responsible for all the improvement recorded in the tables. Good medical care and increasing age lessen recurrences. Nevertheless, a spectacular decrease in the recurrence rate for rheumatic fever

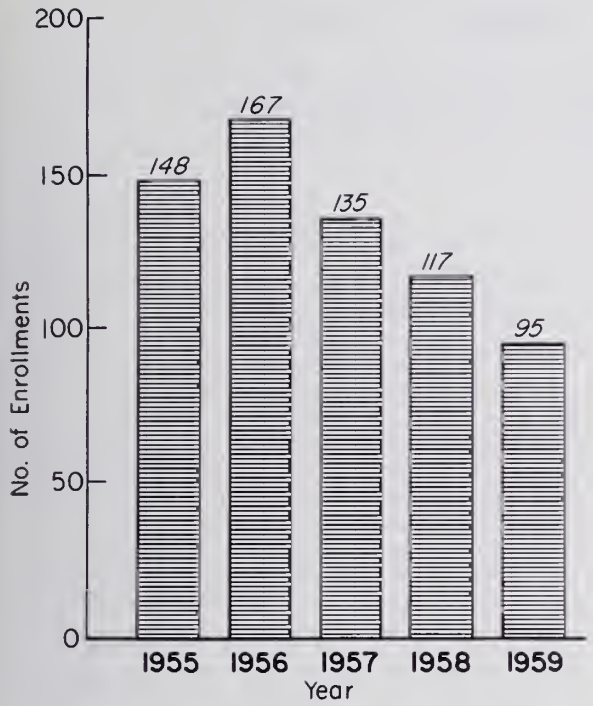


Figure 3. Patients enrolled in the program, 1955-1959.

occurred. No other program of care results in the control of recurrences of rheumatic fever to this degree.

TABLE 4

RECURRENCES BEFORE AND AFTER PROPHYLAXIS AMONG PATIENTS WITH HISTORIES OF RECURRENCE OF RHEUMATIC FEVER PRIOR TO PROPHYLAXIS

	Onset of Disease to Beginning of Prophylaxis	*Beginning of Prophylaxis to End of Study (1960)*
*Number of Patients	141	141
Patient Years	668	434
Recurrences	203	7
Recurrences per 100 patient years	30.4	1.6

* Patients who had substantiated histories of one or more recurrences prior to the institution of prophylaxis.

With the advent of prophylactic regimens, mortality rates improved. In 1953, in the State of Iowa, 17 individuals under 20 years of age died of rheumatic fever or rheumatic heart disease.[10] In 1958, in the State of Iowa, six such deaths were recorded.[11]

Among the enrollees, there have been two deaths attributable to rheumatic heart disease during the five years of the program's operation.

SUMMARY

Since 1955, a program for the prevention of recurrences of rheumatic fever has been operating in the State of Iowa under the auspices of the Iowa Crippled Children's Service. At the request of the family physician, oral penicillin is provided to the patient who has had rheumatic fever. The recurrence rate for rheumatic fever and rheumatic carditis among patients taking prophylactic penicillin has been low. There has been a concurrent decrease in the mortality from rheumatic fever and rheumatic heart disease in the State of Iowa.

These data are in agreement with those in other reported studies, showing the effectiveness of continuous penicillin in preventing recurrences of rheumatic fever and the resulting rheumatic heart disease.

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ISMS INSURANCE GROUP HAS BEEN REOPENED

The statewide Blue-Cross-Blue Shield group program for physicians that was approved by the Committee on Group Insurance and by the ISMS House of Delegates will complete one year of operation in January, 1961.

This plan for ISMS members is being reopened for new enrollments and transfers. Applications will be accepted prior to December 1, 1960. The coverages and costs for physicians presently enrolled will remain unchanged.

Information on the provisions of this plan has recently been mailed to all physicians who have not as yet availed themselves of it.

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 34-YEAR-OLD MAN was first seen at the University Hospitals complaining of a pain in the back, gas on the stomach and a fast heart beat. He had had an episode of right chest pain at age 16 and had undergone bed rest for two months, having been told that he had a "blood clot in the chest." At age 21, he had been rejected from military service because of an enlarged heart. Afterwards, he had become the father of two children and had worked hard as a farmer.

Two months before coming here, he had had an episode of dizziness and tachycardia while trying to crank a lawn mower. The tachycardia lasted two hours. He was treated with sedatives, went to sleep and had a normal heart rate when he awoke. During the ensuing two months he had several more episodes of tachycardia. A diagnosis of auricular flutter was made. The attacks responded to quinidine. He had no exertional dyspnea.

The patient was well developed and weighed 150 lbs. The left border of cardiac dullness was slightly to the left of the midclavicular line, and the right border 5 cm. to the right of the midsternal line. The heart sounds were faint. Sinus arrhythmia was present. There were no murmurs. The ventricular rate was 60 per minute. The blood pressure was 125/70 mm. Hg. An electrocardiogram showed ventricular ectopic beats and findings compatible with an old posterior myocardial infarction. Postero-anterior and lateral films of the chest showed clear lung fields, generalized cardiac enlargement (Danzer ratio 0.54), and an anomaly of the second rib on the right. The cardiac fluoroscopist thought the findings were suggestive of myocarditis. The serum cholesterol was 269 mg./100 ml. The patient was told to work half-time and was given nitroglycerin, 0.65 mg., for anginal pain.

Two weeks after leaving here, he had another attack of tachycardia. An electrocardiogram at that time showed ventricular tachycardia. He responded to quinidine in a dosage of 2.4 Gm. per day.

Three months after his first visit, he was seen again for checkup because the episodes of tachycardia were continuing at intervals of between two days and two weeks. The blood pressure was 135/85 mm. Hg, the pulse was 72 and regular, the neck veins were not distended, but dullness was present at the right base, and the breath sounds were diminished in this area. The cardiac findings were as before. The liver was not enlarged, and there was no edema of the legs. The urine was normal, the white blood cell count was 9,750/cu. mm., the hemoglobin was 13.5 Gm./100 ml., and the sedimentation rate was 155 mm./hr.

Postero-anterior and lateral films of the chest showed cardiac enlargement (Danzer ratio 0.56), and right pleural effusion, but no infiltration in the lung fields. An electrocardiogram showed further inversion of T waves in leads V_1 to V_6, a sinus rhythm, and an abnormal QR complex in leads III and aVf. The interpretation was "old posterior myocardial infarction."

Examination of venous blood by a special technic designed to disclose cells characteristic of lupus erythematosus was negative. The radioactive iodine uptake of the thyroid gland was 12 per cent at four hours, and 28 per cent at 24 hours. A right thoracentesis resulted in the withdrawal of 150 ml. of clear, straw-colored fluid. This fluid had a specific gravity of 1.017, and on culture it was sterile.

The clinical diagnosis was "extensive necrosis and scarring of cardiac muscle as a result of myocarditis." The patient was continued on digitoxin, 0.1 mg. daily. This medication had been started just before his admission. Quinidine was discontinued because it had not seemed to control the episodes of tachycardia. For further attacks of tachycardia, Pronestyl, 0.5 Gm. four times daily was suggested.

Eight months after his first visit, he returned to the hospital for the last time. He had continued to have episodes of tachycardia. Some lasted several hours and were associated with vomiting. Pronestyl and quinidine were used in treatment. There was doubt as to whether these episodes terminated spontaneously or as a result of medication. One week before admission he had gone into shock as a result, it was thought, of a Stokes-Adams phenomenon. He had turned black, had a convulsion and become unconscious. Two days before admission, his urinary output had decreased to 200 ml. per day, and he had developed edema and severe abdominal distention.

The physical examination that was given him on readmission revealed the following: a papular eruption over the shoulders and back; dullness to percussion of the right thorax and left base; a cardiac rate of 72 per minute, no murmurs and distant heart sounds. The blood pressure was 124/76 mm. Hg. The force of the peripheral pulse decreased during inspiration. The abdomen was distended and tympanic; the liver was down 6 cm.; sacral, elbow and pedal edema was present.

The venous pressure was 295 mm. saline. The urine contained 2+ albumin, 1+ blood, numerous red blood cells and an occasional granular cast. The blood urea nitrogen was 185 mg./100 ml.; sodium 121 mEq. L; chloride 79 mEq. L; potassium 5.5 mEq./L; CO_2 content 7.8 mEq./L. The hemoglobin was 11.5 Gm., and the white blood cell count was 17,450/cu. mm.

X-rays of the chest showed massive right pleural effusion.

The patient's condition deteriorated rapidly. He developed Cheyne-Stokes respiration, and died on the day after his readmission.

SUMMARY OF CLINICAL DISCUSSION

Dr. George N. Bedell, Internal Medicine: We shall begin the conference by calling for the students' opinion, and then Dr. January will speak for the staff.

Junior Student: It is our impression that the cause of death was myocarditis due to rheumatic fever, with congestive heart failure and, possibly, bacterial endocarditis.

Dr. Lewis E. January, Internal Medicine: Usually, I approach a CPC discussion with certain fixed attitudes, as follows: There is a very good chance that my conclusion will be wrong, and thus I am greatly tempted to assume that someone has tinkered with what originally may have been a straightforward medical record, with the result that the protocol is misleading. I assume that a common disease is never chosen for discussion, and I sometimes think a certain hopelessness is apt to characterize the discussion of a problem that has already been solved by death.

The case today seems to confirm these attitudinal sets. I first read the protocol hurriedly, and it seemed that this surely was a problem of heart disease. Then, I suddenly realized that a protocol that gave the diagnosis would be almost unprecedented. This one goes so far as to say that this patient had angina, posterior myocardial infarction and myocarditis. Thus, it seemed logical to assume that these diagnoses couldn't possibly have been correct, and therefore that the protocol was serving merely as a smoke screen to hide something exceedingly rare, or that the problem wasn't heart disease at all. Even so, I had no choice but to use the protocol.

The disease seems to have run its major course in about eight months from the time of the patient's first visit here. It seems obvious that here was a young man whose heart disease had been recognized 13 years earlier, but who had exhibited no symptoms until the final eight months of progressive difficulty from repeated paroxysmal cardiac-rhythm disturbances, mainly a serious and nearly refractive ventricular tachycardia and an enlarging heart with more and more cardiac failure. There is a casual reference to chest pain, and the electrocardiogram is said to have indicated changes attributable to posterior myocardial infarction. Finally, there was a catastrophic rhythm disturbance that resulted in such serious, acute cardiac failure as to lead to shock, a Stokes-Adams attack and renal ischemia, with resultant lower nephron nephrosis.

It seems to me that death was from the associated uremia and cardiac failure. There is no point in supporting this thesis by means of a detailed analysis of every line in the protocol, nor is there any reason to discuss the therapy. These facts are sketchy anyway, but the proper drugs for the treatment of such a problem are listed, and in the absence of any evidence to the contrary, I must suppose that they were properly used.

The basic problem, then, is the identification of the type of underlying heart disease. Here, I should like some amplification of certain information before proceeding further. Dr. Bedell, can you tell me whether there is proof that the earlier arrhythmias were atrial flutter?

Dr. Bedell: We know only that the referring physician had identified the earlier arrhythmia as atrial flutter.

Dr. January: Also, may I see a representative electrocardiogram, or can you assure me that paroxysmal ventricular tachycardia did indeed occur, and that the changes of posterior myocardial infarction were clear cut?

Dr. Bedell: The answer is "yes" in both instances.

Dr. January: I am curious about the angina pectoris. Does the record clearly indicate that this patient had angina pectoris and that nitroglycerin had the expected, dramatic effect? This is a fairly crucial point, for angina pectoris is one thing and pain in the chest treated with nitroglycerin may be quite another. Furthermore, I have already spent a fair share of my life "unmaking" the diagnosis of symptomatic coronary atherosclerosis, and I need to know how far I must go in that direction this afternoon.

Dr. Bedell: The evidence for angina pectoris consists only of a note made by the physician who saw the patient at the time of his first admission. It states that he had transient, retrosternal pain. He hadn't previously been treated with nitroglycerin, and this physician prescribed it so as to ascertain its effect.

Dr. January: Is there subsequent information to indicate that nitroglycerin was effective?

Dr. Bedell: No.

Dr. Ernest O. Theilen, Internal Medicine: I saw this patient later in the course of his illness, and it was my opinion that he did not have angina.

Dr. January: Thank you. You have given me an unexpected bonus. Are the chest x-rays to be shown?

Dr. Carl L. Gillies, Radiology: This patient's films have been misplaced in our files, and I have

only one photoroentgenogram of the chest to show.

Dr. January: This film does confirm the large heart. The protocol indicates that the lung fields were congested, but here they seem to be clear.

Dr. Gillies: You are correct. They are clear in this film.

Dr. January: Dr. Gillies, the protocol quotes the fluoroscopist as saying that the findings suggest myocarditis. That seems to me to be going a little far. Do you have some way of identifying myocarditis from an x-ray film?

Dr. Gillies: Oh no, no.

Dr. January: Then let's go back to the protocol and consider what may have happened to this patient. First, at age 16, according to the patient's statement 17 years later, he had had right chest pain and had been told that the cause was "a blood clot in the chest." That is about the sort of account one might have expected under the circumstances. But even so, I am quite willing to believe that that was the beginning of his heart disease, and I wish we knew more of the specific details. He was in bed for two months at that time, and the supposition is that he was quite ill. Almost certainly, a previously healthy 16-year-old boy didn't have a sudden pulmonary embolus or pulmonary infarct, as the quoted words imply. At any rate, he evidently recovered completely, but five years later an enlarged heart was recognized. It is likely that this was a correct observation, since it's almost certain that a chest x-ray was made before a man was declared unfit for military service during those years. I'll return later to the initial illness, but here I should try to dispose of rheumatic heart disease.

This is the diagnosis proposed by the students, and I think I can point out why they should dismiss that possibility. There is no indication that the patient ever had a cardiac murmur. Furthermore, if he had had rheumatic heart disease without an obvious murmur, the most likely lesion would have been mitral stenosis. A point is made in the protocol that the fluoroscopist saw no evidence of left atrial enlargement. Also, I see no reason to consider congenital heart disease because of the lack of physical, radiographic and electrocardiographic signs to support any of the common defects.

Coronary heart disease, on the other hand, must be considered for the following reasons. The patient, although only 34 years old, was a male, and fatal coronary heart disease is not unusual in males of this age. Furthermore, the terms *angina pectoris* and *posterior myocardial infarction* have been used in the protocol. The serum cholesterol was elevated—for whatever that may be worth—although not exceedingly high. Arrhythmias of one type or another are common complications of coronary disease. On the other hand, coronary heart disease is clinically recognizable with definity only when the patient suffers at one time or another from one or more fairly typical syndromes. Is there evidence that this patient had any of these syndromes?

The term *angina pectoris* is used in the protocol, but as you have heard there is no certain evidence that the disease existed in this patient. The electrocardiogram is said to have been quite diagnostic of posterior myocardial infarction which already was established and electrically stable at the time of the patient's first admission. No information is given as to when he may have had coronary occlusion, if indeed he had such a history, and this is very disturbing to the diagnosis. A silent coronary occlusion with myocardial infarction, or a painless myocardial infarction without coronary occlusion is very, very rare in a young man. Longstanding disease in an older man with a better developed collateral circulation allows for a more atypical course than in a young man. Did this man, as a boy of 16, have an acute posterior myocardial infarction, and was the enlarged heart at age 21 a further reflection of coronary heart disease? Did he work hard as a farmer for the next 13 years with no symptoms of coronary heart disease? I suppose that any or all of these possibilities could be true, but any such conclusion would be one born of desperation.

Arrhythmias of any type are frequent with coronary heart disease. In this case, the onset of symptoms was with an arrhythmia which at first seemed harmless enough—almost like paroxysmal atrial tachycardia or paroxysmal atrial flutter in a young man without significant heart disease. However, things got steadily worse, and paroxysmal ventricular tachycardia was recognized as occurring repetitively. He must have had a score or more of attacks. The attacks defied prevention with the drugs that are usually effective, and treatment seems to have been progressively more difficult. One can infer that the final rhythm disturbance was a very rapid paroxysm of ventricular tachycardia, a complete AV heart block or transient cardiac standstill. Paroxysmal ventricular tachycardia occurs most commonly as a complication of acute myocardial infarction. There is nothing in this protocol to indicate that this patient had an acute myocardial infarction. Repetitive paroxysmal ventricular tachycardia as described here is not a usual sequel to a single myocardial infarction.

Cardiac failure, either as acute left ventricular failure or as severe, advancing congestive failure, is an unusual onset for coronary heart disease in the young. Possibly there is another inconsistency with coronary disease. The protocol never once mentions dyspnea, and the heart failure throughout seems to have been mainly right-sided failure. This is not in keeping with primary failure of the coronary system. Here one expects evidence of

left ventricular failure as well as right-sided failure.

Thus, we are left with only sudden, unexpected death coinciding with the onset of the usual coronary syndromes, and I think that coronary heart disease as a single diagnosis is not a very attractive hypothesis.

Returning now to my initial assumption that only the unusual case is chosen for a clinical pathologic conference, I recall some interesting similarities between this patient and one whom I had previously seen. I followed a man at this hospital from 1948 until his death in 1953. His history began with sudden tachycardia, weakness, dizziness and nausea while pushing—not cranking—a lawn mower. Paroxysmal ventricular tachycardia was proved, and it responded easily to quinidine. He had only a few more attacks during the ensuing four years, usually when he failed to take quinidine prophylactically.

During 1952 and 1953, he had about 40 documented paroxysms of ventricular tachycardia, coming oftener and oftener, and finally becoming refractive to quinidine and Pronestyl. Cardiac failure advanced to an uncontrollable state, and he died suddenly during an attack of ventricular tachycardia. His heart had become larger and larger over the years; he had no heart murmurs, no hypertension, no angina pectoris and no electrocardiographic evidence of myocardial infarction. He died at age 57. Those of us who saw him thought of a number of possibilities, but we were uncritically content to go along with the diagnosis of coronary heart disease, and this, of course, is often the case when a diagnosis is made by exclusion in a patient of the proper age group. The pathologist found this man to have a large, dilated heart, the muscle of which had been essentially replaced by patchy fibrosis and marked fatty infiltration, with only islands of hypertrophied muscle fibers remaining. The coronary arteries were surprisingly normal.

I don't suggest that the patient today had primary fatty infiltration of the heart, but many of the clinical events in the two cases were similar, and coronary disease was not the answer in the patient whose course I have just described. It seems logical to suspect that the patient presented in the protocol had an acute non-rheumatic myocarditis at age 16. There is no possible way to classify it further on the basis of the information that is available. Today, we think most cases of myocarditis unassociated with specific disease are viral in origin. Patients with significant myocarditis who survive nearly always develop myocardial hypertrophy, sometimes extreme, and this would explain the patient's having had an enlarged heart at age 21. The next 13 years are not so easily accounted for, but there are certain possibilities, as follows.

Myocarditis with a chronic course lasting for years has been described. Whether this course is due to a smoldering, progressive inflammatory process, or to a slowly progressive fibrosis as myocardial hypertrophy outgrows the blood supply, or just what effect the stress of hard work plays is not clear. Reinfection by the same or another virus years later is a possibility. This sudden deterioration in cardiac function seems to have a near counterpart in the sometimes poorly understood reasons for progression of established rheumatic heart disease.

It seems to me that a more likely possibility is that the patient, with his heart damaged by an earlier myocarditis, developed sufficient coronary atherosclerosis by age 34 so that the combination of two diseases accounted for the events of the final eight months. The paroxysms of ventricular tachycardia served to spell his doom.

Therefore, I predict that the autopsy report will show a large, diffusely dilated heart with muscle fibers substantially replaced by fibrous tissue. The underlying cause will be a non-specific myocarditis. Secondarily, there will be coronary atherosclerosis, probably not very severe and predominant in the right circumflex artery, to explain the old posterior myocardial infarction. The evidence of chronic passive congestion from heart failure will be obvious, and findings of acute tubular necrosis in the kidneys are to be expected.

Finally, I should note in passing that there is nothing in this protocol that would suggest to me any one of a good many other obscure cardiac diseases. In fact, I think I'll demand an apology if this turns out to be an undiagnosable problem. Incidentally, I did take stock of the negative lupus erythematosus cell test and the normal uptake of radioactive iodine. Also, I chose not to rise to the subtle bait, twice held out, of possible cardiac tamponade or a large heart encased in a constricting pericardium. I assumed that the diminished amplitude of pulsation of the heart and the paradoxical pulse resulted from a large, boggy heart in failure.

Dr. Carleton D. Nordschow, Pathology: Dr. January, as usual, has been quite exact, with perhaps one slight exception that has to do with coronary atherosclerosis. This patient did, indeed, have chronic myocarditis. The anatomic diagnoses are as follows: severe chronic myocarditis; mural thrombus, very old and very large, located in the right ventricle; pronounced pulmonary edema; severe passive congestion of the liver, with intense peritoneal effusion; a few recent thrombi in the periprostatic area; mild generalized fibrosis of the lungs; azotemia; and terminal bacteremia.

Actually, the diagnosis in a case such as this rests somewhat upon one's ability to determine some distinguishing feature in a scar, and from this determine what sort of damaging agent might have been present in the patient 15 years ago. There were no anatomic findings in the scarred

heart that would permit an exact etiologic diagnosis. It showed no granulomatous reaction, of course. There was no evidence of rheumatic disease. The scarring was predominantly in the right ventricle. However, there was one isolated area in the left posterior myocardium, about the size of a half dollar, which showed the same very severe scarring that was present in the right ventricle. The left ventricle was very thick, but the scarring process was quite mild and very patchy. The heart was approximately twice normal weight —600 to 640 Gm. The heart had a very thick ventricular and atrial wall, and showed very prominent dilatation. Microscopic sections of the right ventricle appeared perhaps five times the thickness of a normal right ventricle. The epicardium was entirely normal.

In microscopic section it was apparent that extensive replacement of the myocardial fibers by broad bands of dense, collagenous cicatricial tissue had occurred. The remaining muscle fibers showed marked hypertrophy. Endocardial fibrosis with incorporation of old mural thrombi had produced an endocardial zone of scarring which was equal in thickness to the scarred myocardium *per se*. Chronic inflammation was present, but was quite mild and of very patchy distribution. A pattern of cicatricial replacement of cardiac muscle with fiber hypertrophy quite similar to that described above was present in the tissue of the posterior wall of the left ventricle from the small area of scar noted previously.

The microscopic appearance of the musculature in most of the left ventricle was that of moderate fiber hypertrophy with but very mild and sparse scarring, quite in contrast to the severe damage present in the right ventricle and focally in the left ventricular posterior wall.

In the lung, the alveoli contained rather large amounts of edema residue, with an admixture of erythrocytes. A few small, recent thrombi were present. The liver showed very extensive hemorrhagic central and mid-zone necrosis, interpreted as secondary to severe passive congestion. It was my interpretation that death occurred as a result of intractable cardiac failure, and such a conclusion seems well corroborated by the anatomic findings. One can only speculate concerning the many toxic, viral or bacterial agents that could have been responsible for the observed chronic myocarditis.

Dr. January: Since the original insult to the myocardium seems to have occurred to the patient at the age of 16, do you have any explanation for the chain of events that led to the findings of myocarditis at autopsy?

Dr. Nordschow: No, I am afraid I have no idea. What one is left to interpret is the scar. There was no active inflammation. The coronary artery system was quite widely patent and showed very little atherosclerosis, so that I doubt, from the anatomic evidence, that one could impugn this system as the cause of progressive ischemia. Whether there was a smoldering, repetitive infection or a single insult, I don't know.

Dr. John M. McMahon, resident, Internal Medicine: Dr. January, do you have any idea why this arrhythmia developed in the absence of coronary atherosclerosis or active inflammation of the myocardium?

Dr. January: I don't know what triggers these arrhythmias even in the presence of the conditions that you have mentioned. The explanation probably lies in altered electrolyte or enzyme mechanisms, rather than in specific structural abnormalities.

Dr. Theilen, do you recall whether this was a single-focus ventricular tachycardia, and whether it was from the right or the left ventricle?

Dr. Thei'en: I believe the focus was from the right ventricle.

Dr. January: I can't go further with a clinical-pathologic correlation. Evidently, right ventricular function was primarily disturbed in this patient.

Dr. Robert E. Hodges, Internal Medicine: Dr. January, would you care to express an opinion as to whether or not the induction of myxedema in this patient might have lessened the frequency of his episodes of tachycardia?

Dr. January: Myxedema certainly doesn't have the reputation of being an outstanding cause for rhythm disturbances. Radioactive iodine has been given to a few patients with repetitive rhythm disturbances of various types, but I think it hasn't been conspicuously successful. I don't recall whether myxedema has been introduced with the specific plan of preventing paroxysmal ventricular tachycardia. In this patient, considering how little functional muscle seems to have been spared, I wouldn't have expected myxedema to affect the course favorably.

Dr. Bedell: By the time this patient was seen, the myocarditis was well established, the damage had been done and the sequence of events leading to a fatal outcome had been set in motion. Sometimes we see patients in whom our clinical impression is myocarditis, but the etiology is in doubt. Finding a precise etiology can be very difficult. We have asked Dr. McKee to outline some of the steps that might be helpful in determining whether a myocarditis is viral or not.

Dr. Albert P. McKee, Bacteriology: It would seem difficult, if not impossible, to diagnose the cause of a chronic myocarditis in retrospect. Demonstrating antibody against any one of several infectious agents merely means that the patient has at some time or another been infected with the agent. An unusually high titer against a suspected agent shortly after the onset of acute myocarditis, or better, a rise in titer, makes the suspicion against that organism more secure. Isolating

the agent *and* showing a rise in antibody titer against it would be best.

It is easy to misdiagnose some cases as far as the etiological agent is concerned. Influenza is a case in point. To remove the heart specimen without contaminating it with virus from the respiratory tract probably would be difficult. Some of those cases diagnosed as influenza upon which I checked didn't have the virus isolated from them, but because death had occurred during an influenza epidemic in the community, the death was said to have been due to influenza. One of the adult cases so described had complained of nausea, vomiting and diarrhea.

I would agree that a long list of agents are said to cause myocarditis. Rather than to itemize such a list, it would seem more worthwhile that I mention a few of the more interesting ones.

One such case was reported by Sayers.[1] The patient had suffered a severe attack of proved diphtheria with myocarditis and peripheral neuritis in 1942. He died from congestive heart failure in 1954—12 years after the diphtheria. From the time of his first illness until his death, he had persistent EKG abnormalities, and at autopsy, diffuse fibrosis was found throughout his myocardium. The coronary vessels were normal. Sayers suggests that the fibrosis was a sequel to the patient's diphtheria.

Another interesting case was that of a probable mumps myocarditis in a 41-year-old male.[2] The parotitis occurred first, followed in 13 days by retrosternal pain and abnormal EKG findings. Serum from this patient, taken 16 days after the onset of parotitis, showed a titer by complement fixation versus mumps antigen of 1:64. The titer rose with subsequent specimens to a high of 1:256. The patient recovered.

Coxsackie B viruses apparently are able to induce intrauterine or neonatal infections in newborn infants.[3] These outbreaks of fatal myocarditis have occurred when there were concomitant outbreaks of Coxsackie infections in the community. Those in Johannesburg[4] and Southern Rhodesia[5] occurred during a time when Bornholm's disease was prevalent. Summer grippe accompanied the cases in Amsterdam.[6] In the cases mentioned above, the virus was isolated from feces and brain, and in some instances from heart muscle. Not uncommonly, the virus is also isolated from the mother, who usually shows signs of an aseptic meningitis or Bornholm's disease. In one infant, a neutralizing titer of 1:320 was found in the serum on the eleventh day of illness—the day he died. His mother had had a less than 10 titer against Coxsackie B-4 at the time the child was born.

In acute myocarditis, it would seem logical to make an attempt to collect certain important specimens for study. An attempt to isolate a bacterial agent from the throat or the blood stream would seem indicated. Attempts to isolate virus from throat-swab specimens, stool specimens and blood might meet with success. Serum should be available so as to permit one's following any change in titer against whatever agent is isolated. This ties the agent to the patient.

Monkey kidney cells, preferably, or human ammion are good cell clives for such viruses as have been incriminated in myocarditis. Suckling mice help differentiate the Coxsackie A and B groups. Some of the viruses alleged to cause myocarditis, such as mumps, will grow in eggs. A Schick test may help one in making up his mind concerning diphtheria. At best, trying to establish the etiology of chronic or past myocarditis would be very difficult. Finding the causative agent in acute myocarditis should be easier, but please note that I haven't said "easy."

Dr. Ian Maclean Smith, Internal Medicine: I wonder whether an agent resembling Escherichia coli was isolated from the blood, and if so, whether it had been present for a week before the patient's death. The skin eruption, the numerous red cells in the urine and a white blood cell count of 17,450 might indicate bacteremia.

Dr. Nordschow: The agent isolated from heart blood at autopsy was Pseudomonas aeruginosa. I suspect that it was a terminal invader, since the patient didn't shown an inflammatory cellular response in any organ system.

Dr. Frederic W. Stamler, Pathology: It seems to me that one important aspect of the case has been treated rather casually—i.e., the history of the patient's illness at age 16. Do we have any further information concerning that?

Dr. Bedell: I was unable to get in touch with the family doctor, who now is semi-retired, and so we don't have that information.

Dr. Theilen: Attempts were made to get this information from the patient, from his family and from his physician, but without success.

Dr. Bedell: I think the best clinical impression is that the illness at that time was probably a myocarditis, and that it was a reasonably severe illness, since he was kept in bed for two months.

SUMMARY OF NECROPSY FINDINGS

At necropsy examination, the cause of death was thought to have been congestive cardiac fail-

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6. van Creveld, S., and de Jager, H.: Myocarditis in newborn, caused by Coxsackie virus; clinical and pathological data. ANN. PAEDIAT., Basel, **187**:100-118, (Jul.-Aug.) 1956.

ure. The heart showed generalized hypertrophy and dilatation, with particular prominence of the right atrium and ventricle. The heart was enlarged to 1.9 times the average heart weight for a male of this age. The right ventricle showed approximately a 300 per cent increase in thickness, and the left ventricle was approximately 100 per cent greater in thickness than average. Deformation of the valves was not present.

The other pertinent findings were directly related to congestive cardiac failure, and appear in tabular form below. Scattered small pulmonary emboli were present and may have arisen either from mural right ventricular thrombi or from periprostatic venous plexus thrombi.

ANATOMICAL DIAGNOSES

1. Myocarditis, severe, chronic
2. Mural thrombus, right ventricle, recent
3. Edema of lungs
4. Passive congestion of liver, acute and chronic
5. Effusion, pleural spaces (rt. 1,250 cc.; left 600 cc.)
6. Effusion, peritoneal space (150 cc.)
7. Thrombosis of veins, periprostatic zone, recent
8. Fibrosis of lungs, mild, generalized
9. Azotemia (BUN 180 mg./100 ml.; creatinine 10.0 mg./100 ml.)
10. Bacteremia, agonal (Pseudomonas aeruginosae).

Coming Meetings

In State

Dec. 2	**Lung Disease (SUI Dept. of Internal Medicine and Iowa Trudeau Society).** University Hospitals, Iowa City

Out of State

Nov. 2-3	**Annual Postgraduate Assembly.** San Diego County General Hospital, San Diego
Nov. 2-5	**American Society of Tropical Medicine and Hygiene.** Biltmore Hotel, Los Angeles
Nov. 3-5	**Fractures.** University of Colorado Medical Center, Denver
Nov. 4-5	**Central Society for Clinical Research.** Drake Hotel, Chicago
Nov. 4-6	**County Medical Societies Conference on Disaster Medical Care.** Palmer House, Chicago
Nov. 7-9	**Obstetrics.** The University of Kansas Medical Center, Battenfield Auditorium, Kansas City
Nov. 7-9	**Physical Medicine for Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis
Nov. 7-11	**Electrocardiography (American College of Physicians).** Salt Lake County General Hospital and World Motor Hotel, Salt Lake City
Nov. 7-18	**Board of Surgery Review, Part I.** Cook County Graduate School of Medicine, Chicago
Nov. 8-10	**Second Forensic Sciences Symposium.** Armed Forces Institute of Pathology, Washington, D. C.
Nov. 9-10	**Los Angeles Pediatric Society Annual Brennemann Lectures.** Ambassador Hotel
Nov. 10	**Cancer (first program in the Series "Medicine and the Family Physician").** University of Kansas School of Medicine, Battenfeld Auditorium, Kansas City
Nov. 10-12	**San Diego Chapter of the California Academy of General Practice Scientific Symposium.** Hotel Riviera, Las Vegas
Nov. 10-13	**Pacific Coast Fertility Society.** Hotel Tropicana, Las Vegas
Nov. 11	**Fourth Annual Symposium, Chicago Diabetes Association.** Offield Auditorium. Passavant Hospital, Chicago
Nov. 14-17	**Internal Medicine.** University of Kansas Medical Center, Battenfeld Auditorium, Kansas City
Nov. 14-18	**Recent Advances in the Diagnosis and Treatment of Diseases of the Heart and Lungs (American College of Chest Physicians).** Park Sheraton Hotel, New York City
Nov. 15	**The Neurological Examination (third program in the series "General Medical and Surgery").** The Moila Temple, St. Joseph, Missouri
Nov. 15-19	**Puerto Rico Medical Association.** Santurce, Puerto Rico
Nov. 16-18	**Ophthalmology for General Physicians (Refraction).** Center for Continuation Study, University of Minnesota, Minneapolis
Nov. 17	**Neurology and Psychiatry in General Practice.** University of Nebraska College of Medicine, Omaha
Nov. 18-19	**American Medical Writers' Association.** Hotel Morrison, Chicago
Nov. 19-21	**International Symposium on Fibrinolysis (University of Colorado Medical Center).** Aspen, Colorado
Nov. 26-28	**Interim Session, American College of Chest Physicians.** Shoreham Hotel, Washington, D. C.
Nov. 28-Dec. 1	**American Medical Association 14th Clinical Meeting.** Washington, D. C.
Nov. 28-Dec. 2	**Blood Vessel Surgery.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 2	**Surgery of Colon and Rectum.** Cook County Graduate School of Medicine, Chicago
Nov. 28-Dec. 9	**Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago
Nov. 30	**AMA Symposium on Clinical Nutrition.** National Guard Armory, Washington, D. C.
Dec. 1-3	**Orthopedic Surgery for Orthopedic Surgeons and General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis
Dec. 1-3	**Western Surgical Association.** Hotel Statler, Detroit
Dec. 3-8	**American Academy of Dermatology and Syphilology.** Palmer House, Chicago
Dec. 4-9	**Course on Health Mobilization Program for Emergency Hospital Management (USPHS and Office of Civil Defense Mobilization).** OCDM Eastern Instructor Training Center, Brooklyn
Dec. 4-9	**Radiological Society of North America.** Netherland Hilton Hotel, Cincinnati
Dec. 6-8	**Southern Surgical Association.** Boca Raton Hotel, Boca Raton, Florida
Dec. 9	**American Rheumatism Association.** Sheraton Dallas Hotel, Dallas
Dec. 9-10	**Cataract Surgery.** University of Kansas Medical Center, Kansas City, Kansas
Dec. 15	**The Adolescent (second program in the series "Medicine and the Family Physician").** University of Kansas School of Medicine, Battenfeld Auditorium, Kansas City
Dec. 20	**Emergency Surgery of the Hand (fourth program in the series "General Medicine and Surgery").** The Moila Temple, St. Joseph, Missouri



MORE MONEY FOR SCHOOLS

Physicians have special reasons for wanting Iowa schools maintained at their present level of efficiency and, wherever possible, improved. Each of us doctors might have been thwarted in his progress toward competence in medicine if just one or two of his elementary or high school teachers—in physics or chemistry, in mathematics, or in the relatively simple mechanics of reading—had been less than maximally capable and efficient. As a matter of fact, almost every one of us assigns an important share of credit for his interest in biological science to a particular one or two of his public school teachers. We want similar or even better inspiration and guidance—similar or even better instruction—for our own sons and daughters, regardless of the occupations for which they are preparing themselves, and we want those things too for all of the capable young people who can be persuaded to join us or succeed us in the practice of medicine.

If educational standards in Iowa are to be maintained and improved, more money must be spent upon our schools. Currently, there is a serious teacher shortage; it is certain to grow worse within the next few years; and the salaries that are being paid to teachers, except in a few of the largest towns of the state, are neither commensurate with the responsibilities that teachers are expected to assume, nor comparable with those that are being paid to people with similar lengths of training who are engaged in other lines of work.

Among 48 states in the year 1957-1958, Iowa ranked no higher than thirty-third as regards the ratio between the number of its school-age children and its total population, but ranked twenty-eighth as regards both per capita income and average salary paid to teachers. Thus, our state should be able to increase its expenditure per child without running any danger of impoverishing itself.

Yet quite apart from the question of whether Iowa is paying its teachers as well as her sister states are paying theirs, we must take thought of the likelihood that far better pay scales in competing occupations will continue to attract teachers away from their classrooms. Statistics collected by the National Education Association show that in 1958 the average *starting* salary (annual) for men and women in an assortment of commercial jobs for which college training is necessary was only $12 less than the average of the salaries paid to *all* Iowa teachers, both those with long experience and those who were just beginning. In such a situation, only the strongest of dedication can induce men and women to make teaching their careers.

Now let us turn our attention to the alternative methods of financing greater expenditures for public school education. Ideally, education should be paid for at the local level because parents should work in close cooperation with teachers, and direct financial responsibility creates an atmosphere in which parents are most likely to keep an active interest in what their schools are doing. Especially in the vast, newly-consolidated districts where children are transported 10 miles or more to school each day, a pocketbook concern is needed, as never before, to maintain the individual citizen's proprietorship attitude toward his educational facilities and his desire to have his children utilize the teachers' services as completely as possible.

It is quite true of course that property taxes cannot be expected to do the whole job of financing increased school expenditures, and since there are virtually no other levies that can efficiently be made at the local level, either the state or the federal government must be called upon to raise the additional money. Of those latter two, we very greatly prefer that the state should do the job. At the present time, though for the United States as a whole, state aid pays 40 per cent of school costs, state aid in Iowa has been paying a smaller and smaller share, year after year, and the figure is now no more than 10.5 per cent. Thus, it seems, state aid to schools in Iowa should be increased immediately.

Federal aid to schools, so far as Iowa is concerned, isn't necessary and isn't wise. Since Iowa is almost exactly average among the states in per capita income and is somewhat below average in the ratio of educables to total population, federal aid to schools would cost Iowans more money than they would get in return. Furthermore, by accepting money from Washington, our local school districts would be opening the door to ever-increasing federal control of their curricula and even, ultimately, of the manner in which specific issues may be presented to students.

Many physicians have devoted some of their time to the schools of their communities, both in examining and caring for the pupils and in serving as members of boards of education. Both they and we want the schools improved, but want community responsibility preserved!

PRECEPTORS MAY NOW ENROLL

The ISMS Preceptorship Committee is now ready to enroll preceptors for the summer of 1961. Registration materials for that purpose will be sent to county society secretaries in time for the November meetings of the respective county medical societies.

The ISMS Preceptorship Program fills a vital role in the training of the senior students of the SUI College of Medicine, and thus every doctor who can possibly arrange to serve as a preceptor will render an important service by enrolling.

The Preceptorship Committee and the faculty of the SUI College of Medicine are trying to arrange a system for scheduling all or part of some preceptorships for the winter months, rather than having all of them in the summer, but even if a satisfactory plan of this sort can be worked out, it can be put into effect no earlier than a year from now. In the meantime, the Committee and the College of Medicine must enroll preceptors for next summer.

TIETZE'S SYNDROME

Skorneck* has recently reviewed a condition resulting in a bizarre type of pain in the chest. This syndrome, described by Tietze in 1921, consists of painful, non-suppurative swelling of one or more costal cartilages and bone, and is of unknown etiology. The process is benign and self-limited, but often leaves residual tumorous deformities of the affected areas. The syndrome often goes unrecognized, but a total of 13 cases were reported during a two-year period at the Mayo Clinic. It is considered important that this syndrome be recognized in order that one may differentiate it from the more serious causes of chest pain.

The patient usually presents himself complaining of an insidious onset of pain and swelling over one or more costal cartilages, the more usual site being at the costochondral or chondrosternal juncture. The pain increases on coughing, deep breathing or motion. The localized swelling is of firm consistency and is tender for variable periods of time, with the overlying skin remaining normal and freely movable. There is no febrile response or lymphadenopathy. The sexes are affected equally. Roentgenologic changes may be minimal, or there may be rather marked skeletal changes, especially in the ribs, with enlargement, thickening and increased calcification. Gross pathologic changes have been described as hypertrophy of the cartilage, with or without forward angulation, or associated thickening of the adjacent soft tissues including the perichondrium. Histologic studies usually reveal normal cartilage, although there may be granulomatous or fibrotic changes.

The disease is self-limited, and the symptoms regress gradually without treatment. Roentgen therapy has proved to have no definite value. Local procaine or an injection of hydrocortisone has frequently afforded prompt relief from pain and effected a diminution in the swelling, and this simple technic appears to constitute the treatment of choice.

* Skorneck, A. B.: Roentgen aspects of Tietze's syndrome. AM. J. ROENTGENOL., 83:748ff., (Apr.) 1960.

FUNDS ESTABLISHED IN MEMORY OF DR. BARTELS

Numerous requests for information have come to the Dubuque County Medical Society from people who wish to help provide for the children of Dr. Edward R. Bartels, who met a violent death on the night of July 11, 1960, when he answered a call to attend a sick patient. The trial of Victor H. Feguer, who has been indicted in connection with Dr. Bartels' death, will no doubt prompt other people to seek ways of helping the doctor's family.

THE BARTELS MEMORIAL FUND

Two educational trust funds have been started, in Dubuque, to serve this purpose. One of them, set up under the auspices of the Trust Department of the American Trust Bank, is called The Bartels Memorial Fund. Contributions will be controlled by the trustees of the Bank, and the principal of the trust will be used for the education of the Bartels children. Checks for this establishment should be made payable to The Bartels Memorial Fund, and mailed to the American Trust Bank, Dubuque.

THE DR. EDWARD R. BARTELS MEMORIAL TRUST

A second fund has been set up by the Dubuque County Medical Society. It is called the Dr. Edward R. Bartels Memorial Trust, and the principal and income from it will be utilized primarily for the benefit of the Bartels children. Indeed, it has been set up specifically for them.

However, the trust instrument provides that the principal may also be used (1) to assist in providing higher education to any needy child of a member of the Medical Society, (2) to assist a needy wife or widow of a member who has become incapacitated or has died, and (3) to help finance the *medical* education of any individual in need of such assistance, provided that he or she is a native of Dubuque County. Trustees are appointed from the Medical Society, and contributions are being accepted from the members of the Society to supplement the shares of the members' dues that will be allocated to this Fund. Contributions from lay people and from physicians outside the County will also be welcomed. Checks should be drawn to Dr. David Howell, treasurer of the Dubuque County Medical Society, and mailed to him at 1200 Main Street, Dubuque. The uses to which the

principal of this latter Fund will be put qualify donations to it as tax-deductible.

For further information, interested physicians should write to Dr. Frederick Fuerste, Jr., 1360 Dodge Street, Dubuque.

Letter to the Editor

Mr. Edw. W. Hamilton, Managing Editor

Dear Ed:

I regret your editorial: "Surgery for Varicose Veins" [J. IOWA M. SOC., 50:637-638, Oct. 1960]. I am certain that you, also, will regret it. The reasons follow:

1. When one reads of a new or radically different concept, the identity of the author becomes important. What is his experience, what is his training, and what is his standing among his peers? The author of the work from which you quote, using a secondary source, is H. (Hyman) I. Biegeleisen, M.D. I searched for Biegeleisen's Curriculum Vita in the DIRECTORY OF MEDICAL SPECIALISTS—to no avail. I then looked for him in the AMA DIRECTORY and noted that a Hyman I. Biegeleisen had graduated from a New York medical school. No mention of associations to which he might belong, no indication of a specialized practice—as a matter of fact, no mention of a "special interest" in any field of practice. Just an office address. These facts are not intended to belittle Dr. Biegeleisen in any manner; rather, they do put things in a proper perspective and attribute to Dr. Biegeleisen's opinions their full value.

2. The footnote beneath the editorial implies that you abstracted Dr. Biegeleisen's publication in the NEW YORK JOURNAL OF MEDICINE. Actually you used, as a reference, a little "throw away publication," the SCHERING SCIENCE BULLETIN. This is *not* an accredited medical source, and I note that the editor of this bulletin is Lynn Stratton Morris —no degree is pendent to the name. Hence, you as a lay person, are quoting the abstract of another lay person of a publication dealing with pure medical facts.

A case in point: Biegeleisen, you and (Miss or Mrs.) Morris state: "Surgery activates and spreads varicose vein infections, causing the formation of lymph legs in half the cases." This is pure "double talk"; the language is non-medical and nonsensical!

3. Now that we have identified the author and the source of your information, what of the author's basis of experience? He has collected 200 patients, in his practice, who have had surgery for varicose veins. These operations he has judged either ineffective or actually harmful. He has collected these patients during a period of 28 years. Over 50 per cent of these patients had an operation that went out with high buttoned shoes and has been recognized as incomplete for well over 20 years; i.e., simple high ligation. As a matter of fact, only 25 per cent of the entire series had an operation which involved vein stripping, the basis of current surgical therapy. No mention is made of the experience or competency of the surgeons involved. From the experience of these cases, Biegeleisen states: "The observer will be amazed at the *total failure* of the surgical procedure. (Italics mine.) Thus, 189 cases showed complete redevelopment of the original varicose condition. Many cases were worse than ever. The operative procedure had apparently spurred the growth of new varicosities." Anyone familiar with the high ligation and stripping of saphenous varicosities can categorically deny the "complete redevelopment of the original varicose condition."

Biegeleisen also states, with some justification, that "Many women had accepted surgery in the hope that it would give them normal-looking limbs. They were openly disappointed with capillary blemishes as well as with unsightly scarring." Hope springs a turtle in the human nest!—but most surgeons treating varicose veins assure their patients that:

a. Their legs cannot possibly be made into competitive models for "Miss Lovely Gams of 1961."

b. The capillary or spiderweb varicosities are not a part of the system being treated, and will remain.

c. While not taking beauty prizes, the limb should be comfortable.

d. The simple varicosities which sometimes occur after adequate surgical treatment, are readily handled by sclerosing injection.

e. Varicosities tributary to an incompetent saphenous vein cannot be handled successfully by injection treatment alone.

The fact that Biegeleisen injects the greater saphenous vein at the fossa ovalis suggests a proper regard for this vein. Most of us, being less skilled, divide this vein *and its tributaries,* under direct vision, and ligate them. Biegeleisen states: "Many doctors were unaware of the fact that proper injection of varicose veins required training and skill of a high order." The French have a delightful phrase which verbally shrugs its shoulders at this apparent impasse: "Chacun a sou gout"; i.e., each one to his own taste.

But what has been the outcome of Biegeleisen's 200 surgical failures? Sixty-six of the 200 did not complete their treatments with him and so are dropped from his consideration. Of the remaining 134 patients, five had, by admission, a "poor result" and two patients are "still under treatment." This apparently leaves 127, of the original 200, as

satisfied customers following his ministrations. However, only 76 of the 127 good results have "returned for a check-up"; i.e., 59 per cent of the treated group and 38 per cent of the whole series were never seen again. "But, only 50 cases came back for more than one annual check-up, while 26 had only one check-up. There were 51 patients who did not come back for any check-ups. More propaganda is needed in this direction." The words are the author's and need little amplification other than to say he has followed only 39 per cent of the patients he has treated for more than one year. He repeatedly calls this a "long-term study," and from this experience condemns surgical treatment. Actually, Biegeleisen has lost 75 per cent of his initial series from follow-up—it is to be hoped that a significant portion of this group has found competent surgical relief. Not cure! Relief!!

4. Having reviewed the author's training, your source, and his experience, it is necessary to attract your attention to a significant paragraph in his publication: "Meanwhile the sclerosing principle of varicose veins was extended by us and others to various areas of the body.* Injection technics** were soon developed successfully for hydrocele, variocele, raised angioma, pilonidal cyst, internal hemorrhoids, bursitis with effusion, ganglion, and other conditions. In 1939 we described this new mode of treatment to which we gave the name 'sclerotherapy.'" I feel that this paragraph adequately describes the horse that author Biegeleisen has ridden and ridden and ridden. To my knowledge, only the occasional application of sclerosing injections to internal hemorrhoids and simple varicose veins has remained a vague portion of our armamentarium. The other usages mentioned are in the same fix as the passenger pigeon.

5. From the quality of this article, I can only judge that the NEW YORK JOURNAL OF MEDICINE has greater difficulty in obtaining suitable material than the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

6. The "editorial" which you wrote certainly cannot represent the opinion or temper of the ISMS.

7. A great deal of misinformation was stated or implied in your editorial. The treatment of varicose veins is imperfect, and God help us when we are satisfied with any medical or surgical measure. It is perfectly true that there are two schools of thought regarding the treatment of varicose veins. The State University of Iowa, the Mayo Clinic, and current practice belong to one school; Hyman I. Biegeleisen belongs to the other. Let's rephrase your title: "Hyman I. Biegeleisen Scoffs at Surgical Treatment of Varicose Veins." Sub-title: "Series of 200 Patients With 39 Per Cent Follow-up."

How does that sound?

Regards,
TOM D. THROCKMORTON, M.D.

Des Moines
October 18, 1960

* What on earth is "the sclerosing principle of varicose veins"? [T. D. T.]

** Could he mean Techniques? [T. D. T.]

THE IMPORTANCE OF GOOD DOCTOR-PATIENT RELATIONS

It is perhaps both a major strength and a dangerous liability to the medical profession that the nature of its mission and the purity of its aspirations have combined to produce, historically, an image of great nobility. The traditional picture of the physician is that of a learned and sacrificial man, who works all hours of the day and night, whose "prime object . . . is . . . service to humanity," and for whom "reward or financial gain is a subordinate consideration." But this ideal physician is an anachronism in an age in which other Americans work feverishly (but only five days a week and from nine to five) in unabashed pursuit of the "quick buck"; and in a society where power, glamour and conspicuous consumption seem to make a mockery of humility, modesty, and the life of service.

To trace the myriad convoluted trends and circumstances that have altered and in my opinion tarnished the popular image of the modern physician would require at least a volume.

In this limited space, we will consider only one element, but, I think, a central one, in the deterioration of that image. I refer to the factor of remoteness, of the lack of personal involvement between patient and doctor. Compared to the emotional content of the doctor-patient relationship fifty years ago, one might almost characterize that relationship in our day as an estrangement.

Part of the price we have paid for the scientific benefits of specialization has been to separate physicians from one another and to circumscribe the interest and concern of each physician both with respect to the people as a whole and with regard to any one patient.

Science has given physicians so many instruments to test and treat disease, and the doctor's

Please Mark Your Calendar
ISMS ANNUAL MEETING
April 23-26, 1961
Veterans Memorial Auditorium
Des Moines

understanding of disease itself has so far outpaced his understanding of the patient, that the personality of the physician has gone into partial eclipse along with the art of medicine. Indeed, it seems that many people today respect and admire the apparatus and institutions of medicine more than they do the physicians who alone can give them any function.

All this is profoundly regrettable in what we all recognize as an age of insecurity, in which the truest definition of an optimist is one who thinks the future is uncertain.

The estrangement of medicine from modern society is remarkable in the political and social arena, too. With its intense inherent attachment to the principle of individual responsibility, and its insistence on the individual patient, rather than society, as the proper object of rehabilitation, medicine again finds itself somewhat out of touch with the dominant social philosophies of our times.

Thus there are radical differences between the ideals of the individual physician and those of his fellow workers in our affluent society, and there is also a radical conflict between the profession's social outlook and the popular ideologies of our day.

These conflicts pose some extraordinarily difficult problems from a public relations viewpoint. For it is one of the easiest tricks in the trade to portray the individual physician's attachment to individualism as blind selfishness, ignorant reactionism, and antisocial obstructionism.

We must all be realistic enough to admit that organized medicine's activities in the socioeconomic realm have not always been utterly devoid of crass self-interest. Medicine has been far too slow in recognizing the fact that modern medical care is now so highly respected and so universally coveted that it has become a basic human right, along with liberty, breathing, and the right to have a TV set. American medicine in the 1960's will undoubtedly confront some crucial issues, in which the man in the street will make the ultimate decisions. Whether or not he harkens to the voice of medicine, urging him to leave intact the basic freedoms under which physicians can continue to progress in scientific skill and can practice the art of healing for the direct and exclusive benefit of the patient—all this will depend on the image of the physician and of the profession as a whole that rests in the mind and heart of the average American citizen.

The image of the physician will be shaped and colored by his daily performance, by the qualities of dedication and consideration he displays in his daily rounds.

And it would appear that the average citizen's image of American medicine as a whole can be vastly enhanced not by any radical change of social policy, but by a better exposition of policy, and by a more skillful and imaginative public interpretation of the ideals and principles which have enabled American medicine to reach its present high level of effective service to ailing humanity.

—From an editorial in the NEW YORK STATE JOURNAL OF MEDICINE, **60**:3216-3218, (Oct. 15) 1960.

AMA CLINICAL MEETING IN WASHINGTON, D. C.

The 14th clinical meeting of the American Medical Association in Washington, November 28-December 1, will offer a well-rounded, stimulating scientific program designed to interest both family physicians and specialists. The symposia, presentations, and discussions will stress the theme, "New Developments in Old Diseases and Old Developments in New Diseases."

Participants will include proponents of both sides where different views exist on the management of a disease or medical condition. For example, should tonsils be removed when mildly involved or only when they are badly diseased?

The patient's side will also be heard on one symposium. Clarence B. Randall, an industrialist and special assistant to President Eisenhower, will talk on coronary disease from the patient's viewpoint. Other participants and their topics on this panel are:

A. Carlton Ernstene, Moderator, Cleveland, Ohio
Thomas W. Mattingly, Washington, D. C.
Can Coronary Patients Be Predicted by Clinical or Physiologic Measurements?
Donald S. Frederickson, Bethesda, Maryland
Fat Metabolism as a Background to the Development of Coronary Atherosclerotic Disease
Victor A. McKusick, Baltimore, Maryland
Genetic Background of Patients With Coronary Vascular Disease
Eugene A. Stead, Jr., Durham, North Carolina
Management of the Dietary and Psychologic Problems of the Patient With Coronary Disease

The Problem of Management of Nodules, always perplexing for both the specialist and the family physician, will be discussed by three panels concerned with breast nodules, the solitary pulmonary nodule, and nodules of the neck.

Another panel will discuss Recent Advances of the Use of Antibiotics and Steroids, and additional symposia will cover areas in obstetrics-gynecology, pediatrics, edema, cirrhosis and liver diseases, renal problems, osteoporosis, thyrotoxicosis, eye problems, orthopedic surgery and trauma, clinical nutrition and bronchopulmonic disease.

Outstanding physicians and research scientists

from throughout the nation will conduct the scientific program, and the timetable of discussions has been arranged so that physicians may attend the maximum number of sessions and participate in discussions in the particular fields in which they are most interested.

All the scientific sessions will be held at the District of Columbia National Guard Armory. Starting at 9:30 a.m., Monday, November 28, and running until 11:30 a.m., Thursday, December 1, three sections in both morning and afternoon will be held simultaneously in separate rooms at the Armory. One section will be devoted to presentations of formal papers, another to panel discussions, and the third will be a symposium, all of which have question-and-answer periods.

Another important and integral part of the clinical meeting will be the Scientific Exhibit which will contain approximately 125 exhibits in the Armory. Many of these will relate to such specific subjects as cardiovascular conditions, arthritis and rheumatism, and cancer. Others will be grouped into rather broad areas such as neurology and psychiatry, pediatrics, orthopedics, dermatology, drug therapy, surgery, ophthalmology and otolaryngology, obstetrics and gynecology, and laboratory and clinical investigation. Special demonstration exhibits on Fractures and Problems in Delivery will also be included.

Over 100 exhibits will make up the Industrial Exhibition, also in the Armory, where the products, services, and aids provided by industry to physicians and their patients will be on display and staffed by competent and knowledgeable attendants.

Three scientific breakfasts will be held on both Tuesday and Wednesday at the Statler Hotel with the themes of "To Do or Not to Do" and "Problems of Management" in particular diseases or types of cases.

The entire scientific program of the Clinical meeting appears in the October 22 issue of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

COLOR TELECASTS

Six one-hour, color television presentations originating in Georgetown University Hospital will be shown at the National Guard Armory. The live presentations, televised in a special studio or from operating rooms at the hospital, will deal with dermatology, pediatrics, emergency treatment of major injuries, newer methods in surgical treatment of peptic ulcer, orthopedics and pathology.

Dermatology. Demonstration of common skin lesions on patients and discussion of the cases by two physicians; a review of common skin lesions, their diagnosis and differential points.

Pediatrics. Presentation of mental retardation in children as a treatable disease. Consideration of the three conditions manifesting mental retardation—brain damage, metabolic disease and special defects. Discussion of the importance of early recognition and the methods for delineation. Outline of treatment of the problems.

Major Injuries. Presentation of methods of approach to the acutely injured patient. Discussion of immediate, emergency care of a group of common serious injuries. Outline in a graphic manner of the lifesaving methods which must be used to cope with these grave situations prior to the definitive treatment.

Peptic Ulcer. Presentation of an operation for the treatment of duodenal ulcer. Operation showing a hemi-gastrectomy, vagotomy and gastroduodenostomy. Discussion of the indications for surgical intervention and diagnostic criteria leading to operation.

Orthopedics. Surgical clinic on the reconstruction of diseased joints; an operation using compressed polyvinyl sponge for the joint reconstruction. Panel discussion of indications for operation in arthritis and other joint diseases. Presentation of pre- and post-operative care.

Pathology. Presentation of characteristic lesions and x-ray patterns of pulmonary diseases. Graphic illustration of the gross and microscopic pathologic lesions of certain diseases of the lung, including eosinophilic granuloma and infectious pseudotumor.

PHYSICAL EXAMINATIONS FOR DRIVERS

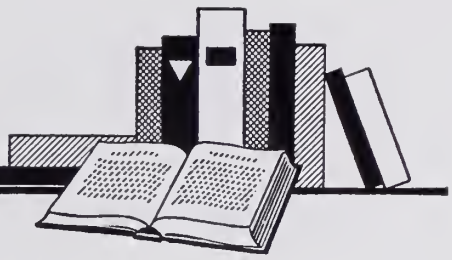
Now Connecticut drivers, as well as their cars, may have the equivalent of a 10,000-mile checkup. Connecticut has been chosen by the U.S.P.H.S. for a pioneering study of the relationship between traffic accidents and the physical and emotional condition of drivers who have been involved in them.

Some 10,000 drivers with poor records and an equal number with good records will be given physical examinations in a modern mobile health unit that will be moved from place to place in that state. Medical tests that can be given in the unit cover height and weight, blood pressure, x-rays and electrocardiograms.

The survey is expected to screen 25,000 drivers in two years.



THE JOURNAL *Book Shelf*



BOOKS RECEIVED

HYPNOSIS IN TREATMENT, by *William Moodie*, M.D. (New York City, Emerson Books, Inc., 1960. $4.00).

RYPIN'S MEDICAL LICENSURE EXAMINATIONS, ed. by *Walter L. Bierring*, M.D. (Philadelphia, J. B. Lippincott Company, 1960. $11.00).

OUTLINE OF PATHOLOGY, by *John H. Manhold, Jr.*, D.M.D., M.A., F.A.C.D., and *Theodore E. Bolden*, D.D.S., M.S., Ph.D. (Philadelphia, W. B. Saunders Company, 1960. $4.75).

OCCUPATIONAL DISEASES AND INDUSTRIAL MEDICINE, by *Rutherford T. Johnstone*, M.D., and *Seward E. Miller*, M.D., (Philadelphia, W. B. Saunders Company, 1960. $12.00).

SIGHT, A HANDBOOK FOR LAYMEN, by *Roy O. Scholz*, M.D. (New York City, Doubleday & Company, 1960. $3.50).

THE MANAGEMENT OF THE DOCTOR-PATIENT RELATIONSHIP, by *Richard H. Blum*, Ph.D. (New York City, McGraw-Hill Book Company, Inc., 1960. $8.50).

OBSTETRICS, TWELFTH EDITION, by *J. P. Greenhill*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $17.00).

WHAT PRICE MEDICAL CARE? by *Sir Earle Page*, M.B., M.P. (Philadelphia, J. B. Lippincott Company, 1960. $3.50).

DIABETIC CARE IN PICTURES, THIRD EDITION, by *Helen Rosenthal*, B.S., and *Joseph Rosenthal*, M.D. (Philadelphia, J. B. Lippincott Company, 1960. $4.50).

THE SEA WITHIN: THE STORY OF OUR BODY FLUID, by *William D. Snively, Jr.*, M.D. (Philadelphia, J. B. Lippincott Company, 1960. $3.95).

BOOK REVIEWS

PRINCIPLES OF DISABILITY EVALUATION, by *Wilmer Cauthorn Smith*, M.D. (Philadelphia, J. B. Lippincott Company, 1959. $7.00).

In the greater part of this book, Dr. Smith, the chief medical advisor to the Oregon State Industrial Accident Commission, presents the basic concepts and fundamentals necessary to the understanding of disability and in the making of accurate disability evaluations.

The volume is divided into four sections. The introductory one deals with the responsibility placed on the physician in determining the extent of disability, the attitude of the physician toward the various aspects of disability, and the relationship between the doctor and the administrative agency. Legislative classifications of disability are listed and discussed briefly, and several pages are devoted to the contents of medical examiners' reports.

In Section Two, the medically rateable disabilities are discussed, along with the basic medical relationship between the workman and industrial employment.

Section Three presents the principles governing the etiologic relationship between a disability or disease and an injury, an understanding of these principles being of great importance in the actual disability evaluation.

In Section Four, evaluations of various specific disabilities (extremities, back injuries, cardiorespiratory injuries) are discussed, this section being designed for the use of persons who haven't taken time to review the preceding sections.

This book would be helpful to the physician early in his practice who will, in all probability, be seeing a number of patients with industrial diseases or industrial injuries. It would also provide a helpful review for physicians familiar with such cases and with present-day concepts of disability treatment and disability ratings.—*William de Gravelles*, M.D.

SIGNIFICANT TRENDS IN MEDICAL RESEARCH (CIBA FOUNDATION TENTH ANNIVERSARY SYMPOSIUM), ed. by *G. E. W. Wolstenholme*, O.B.E., M.A., M.B., M.R.C.P., *Cecelia M. O'Connor*, B.Sc., and *Maeve O'Connor*, B.A. (Boston, Little, Brown and Company, 1960. $9.50).

One of the most heartening signs of change in the right direction, to counterbalance the leftward shift toward government control, is the series of symposia published by Ciba, a private pharmaceutical firm. These symposia are a manifestation of the enlightenment that private industry can facilitate in the field of research. The Ciba Foundation has published at least 23 symposia on basic research—transcripts of meetings, usually held in London, in which world authorities participate.

The volume to be reviewed here is somewhat different from its predecessors in that it reports a symposium on a multiplicity of subjects—one that was designed to show the directions in which medical research can be advanced in future years. The topics are rather esoteric, including, among others. "Molecular Structure in Relation to Biology and Medicine," "Population Dynamics of Body Cells," "The Nature and Mechanism of Action of Hormones" and "Research in Clinical Nutrition."

The reading is not easy for one who is untrained in the specific fields under discussion, but he has the feeling that he is being afforded a glimpse at tomorrow. The participants in the symposium are the men with ideas for the future.

For all those who are interested in scientific medicine, far removed from practicality but with a view to the medicine of tomorrow, this book will be a stimulus.—*Daniel A. Glomset*, M.D.

FROM FISH TO PHILOSOPHER, THE STORY OF OUR INTERNAL ENVIRONMENT, by *Homer W. Smith.* (Boston, Little, Brown and Company, 1953. $4.75).

The first two chapters give a short review of the evolution of the earth and the theories of evolution of animal species that have been advanced since Darwin. The main topic of the volume, however, is the evolution of the kidney from protovertebrate to man.

In order to adjust the interior composition of water and solute to suit different environments with differing osmotic gradients (sea water, fresh water, land, etc.), various types of excretory mechanisms evolved in these different species. I should like to quote one fascinating example: "So when the elasmobranchs were driven from fresh water into the sea, they sought another solution and found one so simple that it would probably escape the imagination of the most theologically minded biologist. They simply reduced the renal excretion of urea, letting the substance accumulate in the blood and tissues until it reached concentrations of 2.0 to 2.5 per cent (figures to be compared with 0.01 to 0.03 per cent in all other vertebrates). The end result is that the animal, instead of losing water to the sea water, draws water out of sea water at no direct physiological expense."

This interesting evolutionary history continues, taking us to the lungfish, amphibia, bony fishes, reptiles and birds, mammals and "animals that live without water," and finally to man. A tremendous number of scientific facts and experiments are reported in these chapters, but they have been written in a most captivating way, and they give a tremendous perspective on the process of evolution.

The summing up is a discussion of "consciousness," with many of the author's own thoughts and philosophical observations.

I can heartily recommend this book.—*Dieter Kirchheim,* M.D.

ACTIVE ALERTED POSTURE, by *W. E. Tucker,* M.B., F.R.C.S. (London, E. & S. Livingstone Ltd., 1960. $3.00).

This small volume deals with the principles and mechanics of dynamic posture. The effective methods of improving posture are well outlined. Too frequently, proper emphasis is not placed upon the benefits of correct posture. The author's term "active alerted posture" is a good one.

This book should be of benefit to all interested physicians.—*Everett M. George,* M.D.

DIAGNOSIS AND TREATMENT OF MENSTRUAL DISORDERS AND STERILITY, FOURTH EDITION, by *S. Leon Israel,* M.D. (New York City, Paul B. Hoeber, Inc., 1959. $15.00).

This book, almost completely rewritten for its fourth edition, has over 600 pages and contains everything conceivable in regard to menstrual disorders. In addition, the last 200 pages delve into problems and technics used in the diagnosis of sterility in the barren couple.

It is well written and well organized, and will serve as an excellent reference work for the physician who wishes to delve more deeply than the ordinary into the study of the menstrual and sterility problems that he encounters in his practice.—*Claude H. Koons,* M.D.

RELAXATION AND EXERCISE FOR NATURAL CHILDBIRTH, SECOND EDITION, by *Helen Heardman.* (London, E. & S. Livingstone Ltd., 1959. $.75).

This is a 30-page booklet written by a physiotherapist. She has written a large book on the same topic, going into much greater detail.

This is an excellent pamphlet to recommend to those few patients who have decided to have their babies by "natural childbirth."—*Claude H. Koons,* M.D.

FRENCH'S INDEX OF DIFFERENTIAL DIAGNOSIS, EIGHTH EDITION, ed. by *Arthur H. Douthwaite,* M.D. (Baltimore, The Williams & Wilkins Company, 1960. $24.00).

This classical treatise, first published in 1912, has reached its eighth edition. The editor has put together a remarkable collection of monographs that will be of great assistance to the physician in establishing a differential diagnosis. In his complete revision of the book, the editor has taken into consideration new symptom complexes, previously unrecognized diseases and the new diagnostic aids that are available to the physician. He has done a considerable amount of revision to the index, as well as to the text, in order to provide for maximum efficiency in the use of the volume. Many of the sections have been rewritten, some of them by new contributors.

Numerous photographs, many of them in color, add to the value of this book. It is truly an index of differential diagnosis from A to Z.—*Marion E. Alberts,* M.D.

TEXTBOOK OF OTOLARYNGOLOGY, by *David D. DeWeese,* M.D., and *William H. Saunders,* M.D. (St. Louis, The C. V. Mosby Company, 1960. $8.75).

This volume is a refreshingly new, very well-written book by two of the leading teachers of otolaryngology in the United States. It is well and attractively bound, the printing is clear and easily readable, and one of its outstanding features is the generous use of excellent illustrations, both line drawings and reproductions of photographs.

It starts out with a very clear, lucid discussion of a method of examination of the ears, nose and throat adapted from Prior and Silberstein's PHYSICAL DIAGNOSIS, which the C. V. Mosby Company published in 1959. In the ensuing 32 chapters, a clear, logical discussion of the principles of treatment for conditions of the ears, nose and throat is presented. Of particular interest to the general physician as well as to the specialist are the chapters on the salivary glands, dizziness and vertigo, tracheotomy, and rehabilitation and conservation of hearing. The section on speech disorders is truly outstanding.

Thus, this handsome text is filled with practical and useful information on the expanding field of otolaryngology. Selected readings are listed at the end of each chapter, and thus the reader is provided some suggestions for further study of each topic. The volume is highly recommended to medical students, general practitioners and otolaryngologists alike as an excellent reference work.—*Byron M. Merkel,* M.D.



MEDICAL HISTORY

120 Years of the Medical Profession In Cedar County, Iowa

Third Installment

H. E. O'NEAL, M.D., AND MRS. VADA YULE KLITH

TIPTON

As readers of the two previously published sections of this narrative must be fully aware, the vignettes of Nineteenth Century physicians in Cedar County which can be pieced together from news stories that appeared contemporaneously in the local press are almost all unflattering, and many of them doubtless have been distorted by the prejudices—political or otherwise—of the successive editors and publishers. But no one, we think, will find them unentertaining.

Dr. S. O. Stockslager, from near Lowden, located at Rochester in 1873, the year of his graduation from Rush Medical College. He had worked with Dr. H. H. Maynard, in Tipton, in 1872. Resolved to make a first-class physician of himself, he shortly went to New York City for further study at Bellevue Hospital and graduated there, with Dr. George S. Focht, in 1875. On his return, he practiced for a short time at Inland.

Dr. N. B. Cotton, who had been born April 16, 1836, in Wayne County, Ohio, had studied medicine under Dr. W. L. Miller, of Jackson, Ohio, and subsequently had graduated from Western Reserve Medical College, Cleveland. He came to Scott County in March, 1863, and to Inland in August, 1874, where he took over the practice of Dr. P. B. Clark. His wife, Ellen Crane Cotton, was also from Ohio.

On July 15, 1875, Dr. Cotton removed a cancer from beneath the eyeball of a woman patient. He actually severed the membrane connecting the eye with the socket, laid the eyeball out, removed the cancer and replaced the eyeball in its proper position.

In 1877, he completed a new office, the best building in the vicinity. He formed a partnership with Dr. A. W. Bowman in 1879, and Samuel C. Bowman replaced Dr. A. W. in 1880.

In 1883, when Dr. Cotton was the "saloon candidate" for the State Legislature, he chaperoned 16 new, German voters to the polls and paid their fees. The Republicans were greatly disturbed when the doctor presumed not to know how they had cast their votes. But his efforts—disinterested or not—failed to win him the election. In 1884, he was one of the alternate delegates to the National Democratic Convention.

Dr. Cotton again became newsworthy in that same year, when on being cross examined during the trial of Dr. Donnelly's suit against him and Dr. Focht, he ordered the plaintiff's attorney, a Mr. Rickel, of Cedar Rapids, to stand back because his breath "stunk." The court, as well as the offending and offended attorney, was said to have been nearly paralyzed.

On October 14, 1886, Dr. Cotton started, with his family, for Bentonville, Arkansas, to make their home. He died in February, 1916, and was brought back to Inland for burial.

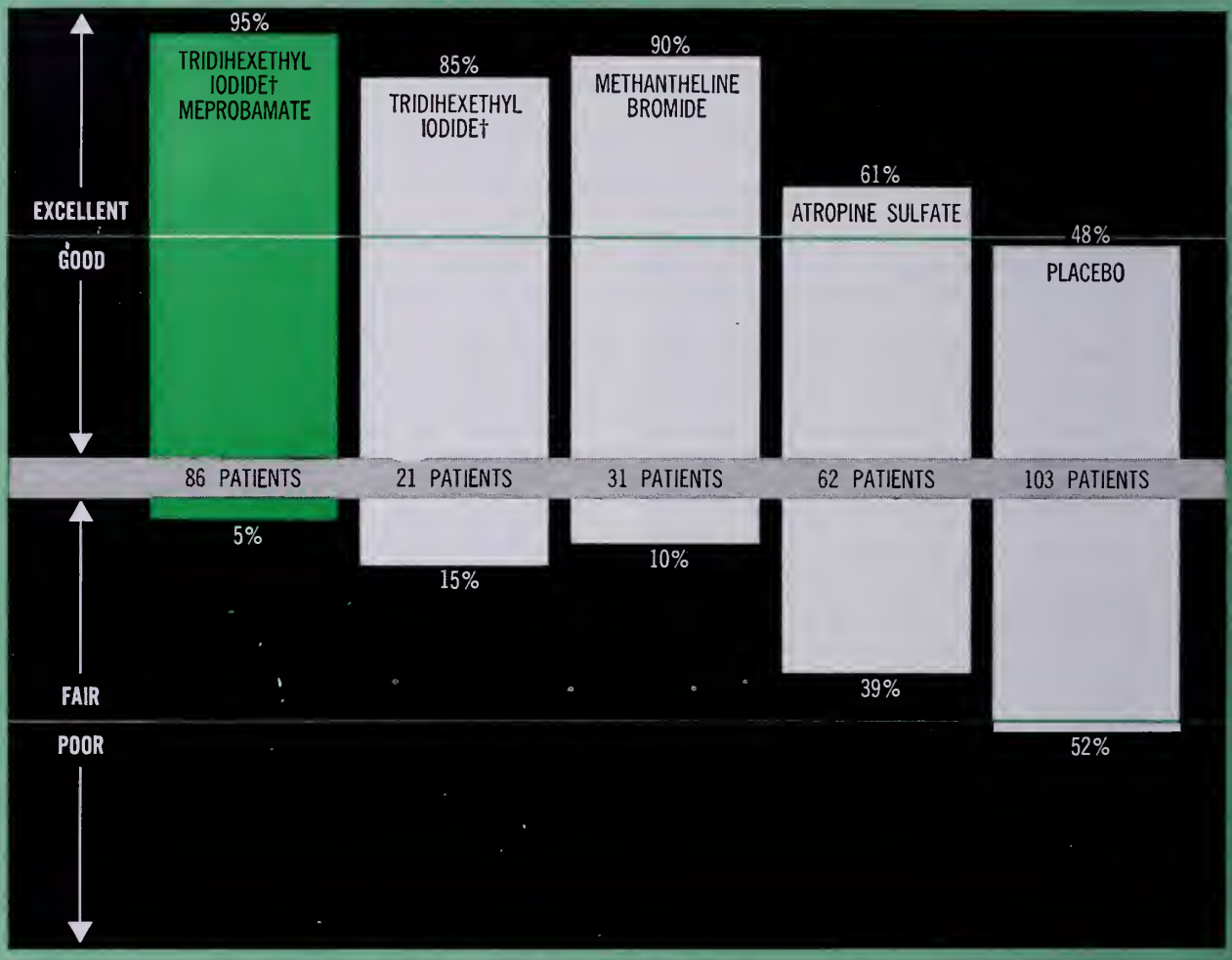
Dr. M. F. Edington was a physician in Rochester in the early 1870's, and was the secretary of the Republican County Convention at three of its meetings. He was too busy with other endeavors to have a prosperous practice. In 1875, he fell into the hands of the Tipton marshal and was constrained to take up quarters in the jail. At the hearing on the next day, he was fined $10 and costs for having been drunk and disorderly, and when none of his pockets yielded that amount, he resumed his stay there for three more days.

Dr. Charles H. Hunt had been born in 1850 at Rock Stream, New York, but had come to Illinois as a child. He got his medical education at Chicago Medical College, graduated in 1873 and located at Stanwood in 1874. Like the other doctors along the new railroad at the north side of the county, he was often called to treat serious injuries, many of which required amputations.

In 1876, with Mr. N. B. Anthony, he bought the Postoffice Drugstore and did business there as C. H. Hunt & Co. After the departure of the man who had been postmaster, Dr. Hunt fell heir to the collection and distribution of the mails, but

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DRY MOUTH	1%	5%	72%	46%	5%
STOMATITIS	1%	0%	28%	14%	0%
VISUAL DISTURBANCES	0%	0%	50%	34%	1%
URINARY RETENTION	0%	0%	18%	11%	1%
DROWSINESS	20%	0%	0%	0%	0%
COMPLICATIONS OR SURGERY					
HEMORRHAGE	0%	9%	3%	9%	10%
PERFORATION	0%	0%	0%	6%	0%
OPERATION	0%	5%	5%	14%	2%
RECURRENCES					
NONE	28%	23%	25%	17%	26%
FEWER AND MILDER	67%	62%	52%	37%	24%
SAME OR MORE	5%	15%	23%	46%	50%

*Atwater, J. S., and Carson, J. M.: Therapeutic Principles in Management of Peptic Ulcer. **Am. J. Digest. Dis.** 4:1055 (Dec.) 1959.

†PATHILON is now supplied as tridihexethyl chloride instead of the iodide, an advantage permitting wider use, since the latter could distort the results of certain thyroid function tests.

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soon gave up that responsibility because of his arduous professional duties.

Dr. Hunt was a staunch Republican, many times was a delegate to the Party's county caucus, and on occasion was willing to make a bet in support of his political forecasts. On November 22, 1884, a crowd gathered to watch a Mr. McCoy enjoy a wheelbarrow ride at the muscular expense of the doctor. Dr. Hunt's judgment had been poor as regards the man to whom Wisconsin would give her electoral vote.

He was health officer of Fremont Township for several years, and in 1891 was elected medical examiner of the Stanwood Legion of Honor. He died suddenly from heart failure or apoplexy on October 7, 1892. Mrs. Hunt was considered quite an artist. She had sold a good many paintings to serve as gifts, and after her husband's death, she conducted several painting classes in Tipton.

Dr. John I. Bailey, born at Columbiana, Ohio, in 1845, came to Iowa in 1851. He attended grade schools in the county, Tipton High School and Wilton Seminary. After two years of medical school, he practiced for three years in Illinois before returning to the State University of Iowa, where he graduated in 1874. He located in West Branch on March 1 of that year.

He was a most competent physician, and had one of the best equipped offices in this part of the country. On the first floor of his office building were his office, a consultation room and a laboratory where he filled his own prescriptions. On the second floor was his operating room, with the latest improvements including devices for administering hot air treatments, which he used—apparently to the satisfaction of many of his patients —in alleviating many diseases, but especially rheumatism. On the second floor he also had a large medical and surgical library, and a general work room.

Dr. Bailey kept two trained nurses on call, in the belief that careful nursing was part of the profession of medicine.

Under the Harrison Administration, he was a member of the examining board for pensions. He was physician for his town and township boards of health, and he served eight years as councilman and six years as member of the school board, two of them as its president. Among other interests, he devoted considerable attention to horticulture and achieved a measure of fame as the originator of the Bailey seedling peach. He was also an extensive dealer in real estate.

His house had all of the conveniences of city homes. In 1890 he stocked his pond with fish from the hatchery in Marshalltown, and his tennis court afforded entertainment for quite a number of players. He had made the acquaintance of John Brown when the abolitionist tarried in Cedar County. He was a member of the G.A.R., the historian of the Old Settlers Association, and an authority on pioneer history. He was married twice, the second of his wives being Phoebe Berry Bailey, of Iowa City. He had four children, Bert, Nettie, Gertrude and Grace. Dr. Bailey died on July 12, 1910.

Dr. Luther M. Focht, a brother of Dr. George S. Focht, graduated from Rush Medical College in 1874 and located in Mechanicsville in 1875, but moved to Verona, Illinois, shortly thereafter. While on a visit to Tipton in 1879, he praised the stringent legislation against quacks and quackery that Illinois had adopted, and said he hoped Iowa would soon grant her citizens similar protection. He died of "consumption of the bowels" in December, 1890.

Dr. G. L. Stemple, born in 1836, started practice at Cedar Bluffs in 1876. He was a member of the Republican County Committee for several years.

In 1879, he attended a woman who told him she had been kicked in the stomach by a neighbor. When called to testify before the coroner's jury, he described his examination and treatment, and concluded with the following laconic statement: "Applied catheter, drew off more urine, found it to be cold, gave an abdominal injection and then gave up the patient." Dr. Stemple sold his residence and left Cedar Bluffs about May 1, 1884.

Dr. W. H. Axline, who came to Tipton from Chariton in June, 1877, has been mentioned before. He came under the supposition that Dr. H. H. Maynard was leaving town. Though Dr. Maynard's change of plans decreased the town's need for a new physician, Dr. Axline enjoyed a fair practice and was active socially as well as professionally. With his family and a railroad carload of goods, he moved to Harlan in 1880.

Not too much is known about a *Dr. Bowers* who had an office close to the Tipton depot, but the mentions of him in the press were colorful. He was often bothered by drunks who came in on the trains and camped on his porch. He sounded reveille, but usually needed assistance to make them "turn out." He seems to have frequented a stretch of road "seven miles east and three miles south" of Tipton, for on one occasion he advertised for a medicine case he had lost there, and on another he sought the return of quite a different article misplaced in the same vicinity, "a black and red paisley shawl with the initials S. J. H. in one corner."

Dr. J. Frank Escher located in Lowden in 1877. Apparently he was a less patient man than the oldtime physician of song and story, for rather promptly, in 1879, he was said to have turned over some of his unsettled accounts to an attorney for collection. In May, 1885, he moved to California.

Dr. James McLaughlin and *Dr. W. Gibbs* formed a medical partnership in Downey in 1877. Dr. McLaughlin was a native of Pennsylvania, and Dr. Gibbs, his son-in-law, had been born in Maine.

Dr. J. B. Kessler, of Inland, graduated from the

Medical Department of S.U.I. in 1877. To graduate, one was required to attend two courses of lectures, each just six months long, and to have studied under a regular practicing physician for a minimum of two years.

Drs. Cotton and Kessler removed the entire breast of a woman patient, and she recovered satisfactorily.

Dr. Percival Randolph Pine, born at Greenville, Ohio, November 14, 1854, graduated from Bellevue Medical School in 1877, and in the same year located at Lowden. While there, he was organist in the Sabbath School and elsewhere. In June, 1879, he moved to Tipton, and was quite promptly appointed county physician at a salary of $150, payable quarterly.

With Dr. Maynard, he performed a notable autopsy in January, 1880, on the body of a three-year-old. When the child was less than a year of age, bright, lively and showing no other signs of disease, his parents had discovered a slight but constantly increasing enlargement of his abdomen. At the time of his death, the child's waist measured 36 inches. The tumor was removed, following his death, and it weighed almost 17 pounds—about half of the boy's weight—and was composed of a hard, fatty substance. It was sent to the Medical Department at S.U.I.

Dr. Pine and Miss Nettie Piatt were married July 28, 1880. Upon their return from a wedding trip to St. Paul and other points in Minnesota, they were guests of honor at a large reception given by Judge and Mrs. J. H. Rothrock. A cornet band, stationed on the well-lighted lawn, furnished charming music. Their only child, Genevieve, was born on September 19, 1882. In March, 1881, Dr. Pine had moved to Tama City, but had returned to Tipton just a year later.

On his return, he engaged in the drug business with Mr. Alonzo Shaw, and later purchased his partner's interest, continuing to operate the drug store until December, 1896. He was promoted to assistant surgeon of the 1st Regiment, Iowa National Guard, with the rank of captain, in 1884, was elevated to surgeon in 1887, and in 1890 was appointed lieutenant colonel and aide de camp on the personal staff of the governor of Iowa.

Dr. Pine subscribed for seven of the newly available 16 candlepower electric lights in April, 1890. He had a great many business investments, among them several in the local light, power and heating plants. Lead ore, supposedly of high grade, was found in Iowa Township by a mining company of which he was a shareholder. He was a member of the finance committee of the state organization of electric light men, and he was active in the Cedar County Fair Association.

The Pine family enjoyed traveling, and since the doctor had amassed a fortune, comparatively speaking, they were able to satisfy their desires. They made extensive trips both in this country and abroad.

Although reserved and quiet, Dr. Pine had many friends among the outdoor enthusiasts, and took time to hunt and fish with them. He was a member of the Masonic Lodge and of the Knights of Pythias. Yet, he was despondent, and during the last week of April, 1907, he took his own life by firing a pistol ball into his head. He left a brief letter stating that he could no longer stand the illness that afflicted him and that he feared losing his mind. He had suffered from insomnia for weeks, and had had a nervous condition for several years.

Dr. E. F. Anderson had been born on July 24, 1834, in Butler County, Pennsylvania. His service in the Civil War had interested him in the medical profession, and he graduated from the Western Reserve Medical College, Cleveland, and studied under Dr. Thomas McGill, of Freeport, Pennsylvania. He was married in 1868, and practiced for a time thereafter at West Sunbury and Plain Grove, in Lawrence County, Pennsylvania.

In July, 1878, he came with his family to Clarence, where his brothers had preceded him. Dr. Anderson's household bade adieu to city life in 1883, and moved to a farm southeast of Clarence, and there the doctor combined farming and medical practice for five or six years. In 1889, Dr. Anderson moved back to town, and to a house opposite the school buildings, where he made his home until his death, June 20, 1909. He was the father of three sons and two daughters. His grandson, Gordon Smith, of Clarence, has some of his instruments, including a mortar and pestle, a lancet, a tourniquet and a turn-key, the usual instrument for extracting teeth that was pictured with the first installment of this narrative.

Dr. Richter, an eccentric specimen of humanity, practiced in Tipton and Lowden in the years around 1878. He apparently had a special value in the eyes of editors, perhaps because his escapades provided spice for the issues of their newspapers. One learns, for example, of an unwelcome visit that he made. The lady upon whom he had called was irritated at his refusal to leave. First she threatened to use and then actually did use a broomstick to hasten his departure.

Dr. J. E. Wright, a man of medium height, rather heavy-set, having light blue eyes and quite grey hair, was a physician at Rochester in 1878. He practiced medicine and kept a sort of pill shop for a year or more. He had a bad record, for he got full frequently, paid his debts sparingly, quarrelled seriously, and in November, 1879, left town abruptly with a young woman, leaving behind a wife and six children.

Dr. A. W. Bowan practiced with Dr. Cotton in Inland from October, 1879, until April, 1880, when he returned to Davenport and was replaced by *Dr. Samuel C. Bowman.*

Dr. Samuel Bowman, born in Edgington, Illinois, in 1852 and an 1880 graduate of Rush, served as health officer of Inland Township for 13 years. He was selected as a member of the Examining Committee for the graduating class in medicine at S.U.I. in 1891.

In the spring of 1895, he sold his drug store and his house, and retired to his farm near Andalusia, Illinois, where he died May 18, 1898. He had been in poor health and had told the tenants on his farm of having been unable to sleep. He needed some sleep before starting for California, he said. A bottle of chloral and a spoon were found in his bachelor's apartment, and thus his death was thought to have been due to an overdose of that drug. The doctor had been a noted taxidermist for a number of years, at the Chicago Academy of Science, and had donated many fine specimens to the Davenport Academy of Science.

Dr. Scott Russell, a graduate of the University of London, began practice at Mechanicsville in 1878 and kept at work there until his death in 1914, at the age of 70. At that time he was the oldest practicing physician in the County. He was considered a good judge of horses, and paid a large price for a colt sired by Almont Raven.

During the smallpox scare in 1899, Dr. Russell vaccinated 44 persons between a Thursday afternoon and early Friday morning.

Dr. David Donnelly had been born in Ontario, Canada, August 28, 1845, and had married Miss Sophie Smith in 1865. They were the parents of three sons and three daughters. He moved to Michigan; then to Indiana; then to Iowa, in 1878; and finally to Tipton, in 1880. He had inherited his mother's Irish temperament; loved, raised and trained good race horses; liked any sort of race and any chance to bet; and trained a man who was a champion in the "walking races" which were popular at that time. He was ordinarily jolly, but was never averse to a good fistic altercation, and consequently his name appears frequently on the court records. He was a member of the Highland Nobles and the Knights and Ladies of the Golden Precept. He died on February 1, 1905, of gangrene of the foot, complicated by pneumonia.

Dr. J. J. Klechner, a homeopath, opened an office in Tipton in 1880, but in 1883, with his family, he went to Newhall. Before leaving, he advertised his buggy, harness, saddle, cutter and household goods for sale, concluding his announcement as follows: "To be sold or given away before May 1, 1883!"

Dr. George Wilson had been born in Canadaigua, New York, May 17, 1852, and had moved to Cedar County as a child of seven. His parents settled in York Prairie, and he attended the Tipton High School. Subsequently, he studied for six years at S.U.I., graduating in 1877. He spent the following summer at Mercy Hospital, Davenport, as an interne, and then located at Chelsea, Iowa, for three years. He married Miss Florence Stockton on November 20, 1878.

Dr. Wilson came to Tipton in April, 1880, bought a home, and in August of that year, bought the City Drug Store. The County employed him to attend the inmates of the Poor Farm and the poor of Center Township for the year 1881, undertaking to pay him $150, which sum was to recompense him not only for his services but also for the medicines he furnished.

In March, 1881, he opened a new building containing the drug store and his office. The dimensions of the structure were 60′ x 22′, it contained two stories and a basement, and all of the available space was occupied. Shortly thereafter, he formed a partnership with Dr. O. E. Deeds, from Delmar, Iowa.

Dr. Wilson purchased a lot and building fronting west on Cedar Street, opposite the city hall, paying $1,000 for it—a pretty stiff price when one considers that the lot was only 17′ x 40′, and on the lot he built a new brick building having two stories and a basement. In 1885, he attended the meeting of the National Medical Association, in Washington, D. C., and the magnificently appointed train on which he and the other delegates traveled, east of Chicago, provided an interesting item for the local press.

Warrants, issued at West Branch, were served upon Mr. G. A. Thompson, who had bought the drug store, and upon Dr. Wilson as his accessory, for the illegal sale of intoxicants. A Mechanicsville man and Dr. J. T. Cook, of Tipton, were the witnesses. The druggist and the doctor were found guilty and fined $30 and costs. Thereafter, at Dr. Wilson's suggestion, Mr. Thompson immediately sold the drug store and returned to Chicago, and in order to avoid a repetition of his difficulties, Dr. Wilson moved his office to his other building.

He was elected president of the Iowa Union Medical Society in 1892, and in that year he attended the meeting of the National Medical Association in Cincinnati. He was vice-president of a building and loan association that was formed in 1893, and a member of the Methodist Church. He died on March 2, 1894.

Dr. Wilson was a successful businessman and physician. In addition to his property and other investments, he left life insurance in the amount of $16,000.

Dr. M. Shoemaker, born in Ohio in 1846, located in Tipton in October, 1881. He was married in Minnesota in the following spring, and during the new Mrs. Shoemaker's brief stay in Tipton, she was active in the Prohibition Club and the W. C. T. U., but then began making long and frequent trips to Minneapolis. The doctor traveled from Iowa to Minneapolis, to Columbus, Ohio, and then perhaps back again, and finally settled down for several months in Chicago. His wife evidently decided to remain in Minnesota, and there is no

further record to be found of her. The doctor's young son by a previous marriage was living with his grandparents in Ohio.

Dr. Shoemaker was induced to relocate in Tipton in April, 1886, by a written request sent him by his friends and former patients. In 1887, he consulted Chicago throat specialists for the second time about a physical disability that had been troubling him, and was advised to abandon all active work for a year.

But on May 14, 1887, he started using an entirely new treatment for consumption, consisting of carbonic acid gas, generated in the usual way, then being forced by an intervening rubber tube syringe through a flask containing sulfurated hydrogen in water, and thence into the patient's bowels, care being taken to prevent the admission of air. There, it went through the patient's system so rapidly that it could be detected on his breath within three minutes. And a fearful and wonderful odor that must have been! At the same time, or so Dr. Shoemaker is said to have claimed, the gas went into the patient's circulation, and upon entering the lungs with the blood, came to the air cells on the circulatory side of the tissue. There, he contended, it did its great work. About two gallons of gas constituted a dose—in fact that amount was enough to inflate the patient almost as much as possible, "without," the public was assured, "any discomfort except for a feeling of fullness which soon passes away."

Dr. Shoemaker moved to Sioux City in March, 1888, when the residual effects of an injury he had sustained years earlier made riding painful for him, and he thought a city clientele would be preferable to a widely-scattered rural one. Word reached Tipton in February, 1897, that he was sinking rapidly and had only a few more days to live. Dr. Harlan Shoemaker, his son, was by then connected with Methodist Hospital, Philadelphia, and was making a name for himself in original research. In the course of his work, he had recently inoculated himself and two nurses with antityphoid serum.

Dr. Oscar Edwin Deeds, was born at Lyons, Iowa, December 26, 1841. He attended Cornell College, and later S.U.I., but laid aside his studies in 1864 to join Company D, 44th Iowa, in which he served as a sergeant. He began, in 1866, to prepare himself for medical practice at Rush Medical College, and in 1867 he graduated, with honors, from Bellevue. On September 15, 1867, he married Louise Sloan, of Clinton County.

Dr. Deeds practiced at Wapello, then in Delmar, and came to Tipton in April, 1882. He practiced with Dr. Wilson for a year, and with Dr. Focht for a year before establishing his own office. He was a member of the G.A.R., of the Methodist Church and of the Masonic Lodge. He died on July 4, 1887, of pericarditis, leaving a widow, two sons and four daughters.

Dr. William Greig located in Clarence in 1882, having graduated from Rush in 1879 and from Bellevue in 1880. He formed a partnership with Dr. Cheeseborough in 1899, but sold out to Dr. D. T. Nicoll in 1901 and moved to Sterling, Colorado, where he was still practicing in 1918.

Dr. H. T. Lanning was a physician in West Branch in 1882. A disastrous fire in February, 1883, destroyed his residence and a storeroom containing drugs. The insurance company paid his claim satisfactorily, but after a few months he finally decided not to rebuild, and went to look for another location in the West.

Dr. J. K. Milbourne, born in Ohio in 1855, graduated from the Medical Department of S.U.I. in 1881. In January, 1882, he came from Atalissa to locate in Mechanicsville. He was interested in race horses and owned several of them, one being an Almont pacer. In 1898, during the Spanish War, he sold his practice to Dr. C. G. Stookey and went to Cuba. On his return, he located in Clinton, where he died of appendicitis in 1906. He served a term as president of the Iowa State Medical Society.

Dr. Henry Schumacher, born April 23, 1856, graduated from S.U.I. in 1882 and came to Durant in the same year. He practiced there until 1902. In an eye operation that he performed, he was the first Iowa doctor to make use of cocaine. He paid $1 per grain for the drug. His hobby was collecting arrowheads, stamps, coins and guns, and he had a museum in which to keep them. His collection contained over 50 guns of antique make and curious design from all parts of the world. Among his Indian relics were over 6,000 arrowheads and 250 tomahawks. When he died, March 4, 1954, he was survived by a daughter, Mrs. Charlies Sievers, of Davenport, and a son, Henry W.

Dr. J. T. Cook, a homeopathic physician, came from Moline to Tipton in December, 1884. He was appointed health officer, and immediately recommended a general clean-up of the city, remarking upon the terrible condition of the cesspools and alleys, and condemning the Chicago and Northwestern Stockyards. He was a rabid temperance man, and, as has already been noted, appeared as a witness against Dr. Wilson in a liquor case. His ideas for reforming the community took him on still other sorts of crusades. His office building was smeared with filth in consequence of his publishing a vigorous letter contending that horse races were an inappropriate technic for celebrating Independence Day. In October, 1885—less than a year after his arrival—he left Tipton for Galesburg, Illinois.

Dr. Lewis E. Safely graduated with honors from the Chicago College of Physicians and Surgeons in 1885, and that same year entered into a short-lived partnership with Dr. M. Shoemaker, the man with the noisome remedy for consumption. He married Lily B. Shearer on January 20, 1887, and

was practicing at Lowden in December, 1889, when an epidemic of grippe overspread the county. Thereafter, he practiced in Clarence for a short time, but then moved to Bozeman, Montana. In about 1909 he was injured when he ran his vehicle into a curb to avoid striking a small child, and he never fully recovered. He was hospitalized in Butte for many months, remained an invalid following his release, and died in March, 1915.

Dr. Otis Blair Wyant, born in Cedar County January 6, 1865, attended high school in West Liberty, and from there went first to S.U.I. and later to Rush. In February, 1886, he graduated as the youngest member of a class of 160. He located in Clarence, but desiring to do postgraduate work and obtain more experience, he returned to Chicago in July, 1890, and attended lectures and worked in hospitals for 11 months.

In June, 1891, he located at Tipton. He was the first "head physician" of the Modern Brotherhood of America and was one of the six men who participated in the formation of that order. Subsequently he was editor of the M.B.A. paper that had a national circulation.

At that time there was a rash of insurance-company organizings in Tipton. A great many of the firms had home offices there, the citizens of the town were insurance-poor for a few years and Tipton was in danger of being called "the insurance capital of the world."

Dr. Wyant was a U. S. pension examiner during Cleveland's administration and was an interested visitor at the Democratic National Convention. He sold his Tipton property in 1902 and moved first to Davenport then to West Liberty and finally in July, 1906 to Winfield, Kansas.

There seems to be some confusion about the proper spelling of the surname of two men who practiced medicine at Cedar Bluffs beginning in 1886. They were *Drs. W. G. and J. F. Youman* or *Yeoman.* Dr. W. G. was still alive and listed as an Old Soldier in 1915.

Dr. J. W. Sansom, who had spent his boyhood in Clarence and had been a teacher, graduated from Rush Medical College in 1878. He married Miss Eliza F. Reed in 1880, and they had one child, Anna Mae, born in 1882. This daughter died only quite recently, after working for many years with the children at the State School for the Blind, in Vinton.

Dr. Sansom practiced at Vail, Denison and Anita before coming to Tipton in 1889. While living at Anita, he was mayor for two years, was president of the Nishnabotna Medical Society, and in 1885, represented the 9th District of the Iowa State Medical Society at the national meeting in New Orleans. He was chairman of the executive committee of the Iowa Public Health Association in 1891.

He practiced in Des Moines for about a year, but returned to locate in Bennett in September, 1894, and once again at Tipton in 1898, where he built himself a fine residence and office on his lots east of the courthouse. He served as president of the Cedar County Medical Society in 1900.

He had suffered with crippled feet for some time, and even had given some thought to having them amputated. While he was the University Hospital for treatment, his wife became ill and died. Dr. Sansom was brought home in a carriage. Later that year (1894), Dr. Ruml treated him in a Cedar Rapids hospital, and his feet were greatly improved. He died of diabetes, February 25, 1907. He was Tipton's oldest practicing physician, and had spent most of his life in Cedar County.

Dr. William A. Staggs, born at DeWitt on January 7, 1865, located in Tipton in 1889. At that time he was a homeopath. Sometime between then and 1899, when he again located in Tipton, he graduated from Rush Medical College, and he practiced thereafter as an eye, ear, nose and throat specialist. He was married twice and had eight children. He died at Estherville, January 14, 1928.

To Be Continued

RISING HOSPITAL CLAIM COSTS

The sharp and continuing rise in hospital claim costs since 1950 was analyzed in a study reported at the annual meeting of the Society of Actuaries, in Chicago late in September.

Mr. S. W. Gingery, associate actuary of the Prudential Insurance Company of America, revealed that between 1950 and 1957 the number of hospital days per insured individual per year increased by 38 per cent for male employees, 19 per cent for female employees and 25 per cent for family units. Although the duration of the average hospital confinement had decreased slightly, this reduction was more than offset by the increases in frequency of hospital confinement. The 1957 experience showed that, although more than a third of the inpatient claims were for less than four days' confinement, a substantial percentage involved lengthy hospital stays. For male employees, 14 per cent were for 14 or more days and 7 per cent for 21 days or more.

"The drop in average duration of confinement reflects the new and improved technics and more effective drugs," Mr. Gingery said. "The increased frequency of hospitalization is due to changes in the practice of medicine, the presence of health insurance, meaning that more people can afford hospitalization, and the greater supply of hospital facilities. The increased charges for hospitalization reflect the inflationary trend since 1950 and the improved services hospitals are now supplying. Despite the increased number of outpatients and the shorter average duration of confinements, the total cost per claim has increased over this period."

TWELFTH ANNUAL MEETING AND SCIENTIFIC ASSEMBLY

The Iowa Chapter of the American Academy of General Practice just completed its twelfth annual meeting and scientific assembly. It was held September 18-20, at Hotel Savery in Des Moines. The newly elected officers are: president-elect, Dr. V. L. Schlaser, of Des Moines; vice-president, Dr. Eugene Smith, of Waterloo; secretary-treasurer, Dr. Arnold T. Nielsen, of Ankeny. The directors elected for three-year terms are Dr. Wm. A. Seidler, Jr., of Jamaica, and Dr. Charles P. Hawkins, of Clarion. Dr. Elmer Smith, of Eagle Grove, and Dr. Clyde J. Smith, of Gilmore City, were elected for two-year terms as AAGP delegate and alternate, respectively. Dr. H. W. Mathiasen, of Council Bluffs, was installed as president.

The directors with unexpired terms of office are: Dr. R. M. Needles, of Atlantic; Dr. Wm. A. Castles, of Dallas Center; Dr. R. F. Frech, of Newton; and Dr. Lee Rosebrook, of Ames. The AAGP delegate and alternate with unexpired terms are Dr. C. H. Stark, of Cedar Rapids, and Dr. R. L. Bartley, of Audubon, respectively.

The two-day scientific assembly was well attended, and the program was excellent. Dr. John Adriani, of New Orleans, discussed "Therapy of Drug-Induced Coma," saying that all physicians should know which analeptics and antinarcotics are effective antidotes for use in treating patients who have become overdosed with any of the many available sedatives, hypnotics, tranquilizers and narcotics. He also discussed some of the fallacies and misconceptions regarding anesthesia for infants and children, and their responses to certain drugs.

Dr. Stewart G. Wolf, of Oklahoma City, discussed some of the urinary disturbances that frequently occur with over-anxiety. He said that polyuria is encountered more commonly with anxiety or resentment, and that oliguria is associated with emotional depression. He urged the recognition and treatment of patients with disturbances of urinary function related to the stresses in life, before any urological surgery is contemplated. He also discussed "Life Stress and the Hemodynamics of Essential Hypertension," and presented studies made on a series of such patients treated mainly by psychological methods.

Dr. Mitchell J. Nechtow, of Chicago, presented "Practical Gynecology" and "Abnormal Bleeding in Gynecology." With slides, he discussed these topics in a very easily understandable manner, and gave the audience a great deal of practical and useful information.

Dr. Peter A. Peffer, superintendent of the Glenwood State School, discussed the therapeutic and training program at his institution. He also explained the administration and operation of the school.

The Committee on Conservation of Hearing for the State of Iowa made a presentation on "Help for Hard-of-Hearing Children." Dr. Byron Merkel, of Des Moines, discussed some causes of hearing loss, and technics for the recognition of such hearing losses in children. James F. Curtis, Ph.D., professor and head of the Department of Speech Pathology and Audiology at SUI, gave a short résumé of his group's work at the University.

Dr. T. J. Litzow, of Rochester, Minnesota, discussed "Treatment of Common Lacerations and Facial Injuries." He utilized slides to illustrate some of his points. He stressed the importance of general supportive treatment until it is safe to proceed with the definitive treatment of facial injuries. He divided his discussion into lacerations, burns, skin grafting, and secondary repair of old scars.

Dr. Beverley T. Mead, of Salt Lake City, gave two very interesting lectures: "Management of the Chronically Anxious and Hypochondriacal Patient," and "The Battle Between the Sexes, or How to Reduce Skirmishes in Office Practice." The latter dealt with personality quirks and foibles more or less characteristic of each sex.

Dr. Robert L. Jackson, of the new medical school at the University of Missouri, in Columbia, spoke on "Management of Children With Diabetes Mellitus." He related how juvenile diabetes differs from diabetes in the middle-aged or elderly patient, and said he hopes that practical methods will soon be available for detecting pre-diabetic patients. He also discussed "Nutritional Care of Infants and Children," stating that this begins

with the proper prenatal nutrition of the mother. He stressed the importance of breast feeding of the infant when possible. In regard to nutrition in children, he stressed the importance of a proper diet, and warned against yielding to the whims of the child.

Dr. Ralph A. Reis, of Chicago, discussed "Planned Labor." He gave a critical evaluation of its advantages, disadvantages, safety and dangers. He also discussed the methods of planned labor currently in use. His second presentation was "The Problem of Spontaneous Abortion." He said that it is occasionally due to sperm pathology or ovum defects, but is usually due to defective germ plasma. The other causes include faulty implantation, pelvic disease and infection, trauma, and occasionally endocrine imbalance. In summary, he stated that the so-called radical treatment, the dilatation and curettage, is actually the conservative treatment.

Dr. Malcolm A. McCannel of Minneapolis, presented the Ernest E. Shaw Memorial Lecture, on "The Family Doctor and His Problem Eye Cases." His presentation was filled with information for the family doctor, together with hints on how he could utilize it.

Thirty-four technical exhibitors provided the physicians with information on their products, and the attention that the doctors paid to them gave proof that they were interested not only in gaining knowledge from the scientific sessions but also in learning "what is new in drugs" from the men who make and sell them.

A hospitality room was utilized and enjoyed by the physicians' wives during the two days of scientific lectures. On Monday evening, the physicians, their wives and the exhibitors enjoyed a buffet dinner and the entertainment that followed.

In conclusion, it was a very successful meeting. This will be evident from the fact that the physicians and exhibitors will return, in equal or greater numbers, to next year's Annual Meeting and Scientific Assembly, to be held September 24, 25 and 26, 1961.

PSYCHIATRIC PROBLEMS OF THE ADOLESCENT

The psychiatric problems of the adolescent will be considered at a postgraduate course in neurology and psychiatry on the campus of the University of Nebraska College of Medicine, in Omaha, Thursday, November 17. It has been designed for general practitioners.

Panel discussion will be conducted on "The Adolescent in His Family in Our Changing Society" and "Some Severe Problems of Adolescence," and in addition there will be a presentation of hospitalized patients belonging to this age group. Another session will take up the topic "How to Get the Most Diagnostic Information Out of a Spinal Puncture."

To pre-register, physicians should write to the Office of Postgraduate Affairs, University of Nebraska College of Medicine, Omaha 5.

IOWA LAB TECHNICIANS LEARN NEW PROCEDURE

At a course conducted in Iowa City early in October, a group of Iowa laboratory technicians were the first in the nation to begin learning a new and quicker way to track down the streptococci that can predispose patients to rheumatic fever and rheumatic heart disease. Although some 50 specialists in the nation have been trained by the U.S.P.H.S. to use the new method, these technicians were the first people at the grass-roots level to be introduced to it.

The technicians who took the course are Mrs. Margaret Burchers, of Mercy Hospital, Cedar Rapids; Mr. Robert Dulaney, of Lutheran Hospital, Fort Dodge; Mr. Clarence Grosz, of Iowa Methodist Hospital, Des Moines; Miss Margaret Phillips, of Medical Laboratories, Des Moines; Miss Virginia Hirst, of the SUI Bacteriology Laboratory; and Miss Ellen Stuart, of the Iowa City VA Hospital. Two bacteriologists, Mr. George Counts, of the SUI Department of Internal Medicine, and Mr. Clarence McFarland, of the SUI Institute of Agricultural Medicine, also took it.

The chief advantage of the new method is that it can tell doctors within four hours—44 hours sooner than the conventional methods—whether a "strep throat" is one that can lead to rheumatic fever or heart disease. A specimen of mucus from the patient's throat is covered with an antigen that has been chemically treated to make it glow under ultra-violet light. If the dangerous streptococci are present, the antigen will concentrate upon them and, in effect, make them glow when they are viewed under a fluorescent microscope.

A fluorescent microscope, purchased with U.S.P.H.S. funds by the State Department of Health, has been in use at the State Laboratory, in Iowa City, since April 1. Eight of the instruments, each costing $1,600, were lent by the U.S.P.H.S. for use by the technicians who took the course.

Attend the
A.M.A. CLINICAL MEETING
Washington, D. C.
November 28-December 1, 1960

STATE DEPARTMENT OF HEALTH

Edward D. Zimmer
COMMISSIONER

GENERAL POLICY GOVERNING THE FLUORIDATION OF PUBLIC WATER SUPPLIES

Although one may find opinions against as well as for the practice of adding fluoride to public water supplies, it appears that the results of numerous experiments in artificial fluoridation have demonstrated the value of the practice in reducing tooth decay in young children. Furthermore, pediatric studies have failed to reveal any harmful systemic effects from water fluoridated to 1.2 parts per million. Therefore, the following general policy was adopted by the State Board of Health in regular session on July 10, 1950:

"After careful consideration of the practicability of adding fluoride to a public water supply, and if there is sufficient local demand as evidenced by approval of the local health authorities, the local dental and medical professions, and the local water works officials, the State Department of Health will assist in setting up the necessary control measures to assure that the concentration of fluoride ion in the finished water is within the recommended limits at all times."

The following statement expresses the stand of the Iowa State Dental Society on the controlled fluoridation of community water supplies:

"In the interest of improving the dental health of Iowa children, the Iowa State Dental Society through its dental health committee recommends the addition of fluorides to community water supplies when approved by the local dental society and other responsibile health authorities."

The American Dental Association adopted a resolution recommending the treatment at its annual meeting in Atlantic City, November 2, 1950.

The following is a summary of the results of fluoridation in one of our Iowa cities:

DUBUQUE

Controlled fluoridation started October 17, 1951.

Flouride content at that time was "Trace."

The first survey was made in November, 1951.

The following statistics are based on a comparison between the results of the 1951 survey and the results of one made in March, 1960, after 8½ years of fluoridation.

The total number of children examined in 1951 was 2,326, and the total number examined in 1960 was 2,322. All of the individuals included in the study had been constant residents of Dubuque.

Age Group	*Per Cent Reduction in Decayed, Missing and Filled Permanent Teeth*	*Decayed, Extraction-Indicated, Filled Deciduous Teeth*	*Per Cent Increase in Caries-Free Mouths*
5-year-olds	54.6	43.5	126
6-year-olds	78.0	48.3	160
7-year-olds	62.7	48.0	441
8-year-olds	63.6	43.3	300
12-year-olds	40.8	—	17
13-year-olds	38.9	—	100

THE TASK FOR 1960 IN INFLUENZA IMMUNIZATION

Protection for the Aged and Chronically Ill

The U.S.P.H.S. Advisory Committee on Influenza Research has recommended that persons of all ages who have chronic cardiovascular, pulmonary, renal or metabolic diseases, and all pregnant women, be immunized against influenza as a routine practice, since patients in these categories have experienced the highest mortality rates.

The specific recommendations of the U.S.P.H.S. for routine immunization include:

A. Persons at all ages who suffer from chronic debilitating diseases—cardiovascular, pulmonary, renal or metabolic disorders—and in particular (1) patients with rheumatic heart disease, especially those with mitral stenosis; (2) patients with other cardiovascular disorders such as arteriosclerotic or hypertensive heart disease, and especially those with evidence of frank or incipient cardiac insufficiency; (3) patients with chronic bronchopulmonary diseases such as chronic asthma, chronic bronchitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema and pulmonary tuberculosis; (4) persons with diabetes mellitus; and (5) patients with Addison's disease.

B. Pregnant women.

C. All persons 65 years of age and older.

Influenza may not be more likely to attack persons in these specified groups than others, but the

occurrence of influenza in these persons is more likely to be a life-threatening event. Influenza alone places a severe stress on cardiovascular and pulmonary function, and the frequency of bacterial complications is greatly increased in patients with chronic cardiovascular-renal and pulmonary disease.

THE VACCINE

Description. The commercial influenza vaccine is an aqueous, polyvalent, killed-virus preparation, with a prescribed antigenic composition for 1960 as follows:

Type	*Strain*	*CCA Units Per cc.*
A	PR8	100
A_1	Ann Arbor 1/'57	100
A_2	Asian	200
B	Great Lakes 1739/'54	100

The total antigenic potency of the vaccine is 500 CCA units per cc.

Dosage. The recommended adult dose of polyvalent vaccine for the initial immunization is 1.0 cc. (500 CCA units) subcutaneously, administered on two occasions separated by two or more months. Preferably, the schedule of vaccinations should be completed by November 1. Each fall thereafter, prior to November 1, persons in the groups specified to receive continuing protection and who have already had the initial immunizing series should receive a 1.0 cc. booster dose of the vaccine subcutaneously.

Effectiveness. Numerous reports of vaccine evaluations carried out within recent years have demonstrated that influenza vaccination may be expected to be from 60 to 75 per cent effective in preventing the disease.

Reactions. In adult populations, a low incidence of side reactions may be expected. These are most frequently in the form of transient febrile responses or local tenderness at the injection site. Penicillin sensitivity need not be of concern when one is injecting influenza vaccine, for current preparations contain none of this antibiotic. Since the vaccine is produced in eggs, however, the Advisory Committee has advised *against* vaccination of persons who are unable to eat eggs or chicken because of food allergy, or who have had a definite allergic reaction, whether urticarial, asthmatic or anaphylactic, on previous inoculation with an egg vaccine.

In the past, influenza immunization programs have tended to be intermittent, predominantly in response to public concern before and during epidemic periods. Such epidemics tend to recur in cycles of unpredictable periodicity, but an endemic incidence occurs continually. For these reasons, immunization of the specified high-risk groups is recommended to begin now, and should be continued annually, regardless of the predicted incidence of influenza for the particular year.

MORBIDITY REPORT FOR MONTH OF SEPTEMBER, 1960

Diseases	*Sept. 1960*	*Sept. 1959*	*Aug. 1960*	*Most Cases Reported From These Counties*
Diphtheria	0	0	3	
Scarlet fever	42	70	59	Jefferson, Johnson
Typhoid fever	1	5	1	Winneshiek
Smallpox	0	0	0	
Measles	18	13	29	Dubuque
Whooping cough	6	22	5	Des Moines
Brucellosis	12	10	13	Dubuque
Chickenpox	9	12	28	Clay, Des Moines
Meningococcic meningitis	1	0	1	Carroll
Mumps	108	3	325	Clay, Dubuque, Scott, Story
Poliomyelitis	3	114	4	Black Hawk, Calhoun, Clay
Infectious hepatitis	29	9	28	Polk, Woodbury
Rabies in animals	7	8	21	
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	30	27	35	For the state
Syphilis	71	121	92	For the state
Gonorrhea	89	86	133	For the state
Histoplasmosis	0	0	2	
Food intoxication	0	5	0	
Meningitis (type unspecified)	3	5	1	Carroll, Hardin, Sac
Diphtheria carrier	0	0	0	
Aseptic meningitis	9	10	0	Guthrie, Polk
Salmonellosis	2	8	5	Black Hawk, Jackson
Tetanus	0	1	0	
Chancroid	0	0	0	
Encephalitis (type unspecified)	3	2	0	Carroll
H. influenzal meningitis	0	0	0	
Amebiasis	1	1	2	Marion
Shigellosis	10	1	2	Johnson, Linn, Polk
Influenza	7	0	0	Dickinson



Doctors of Medicine Are Willing To Help Osteopaths Solve Their Problems

It is unfortunate, nowadays, when America needs as many physicians as it can get, and certainly can afford to provide the finest training to all of the young people who are preparing to serve in such a capacity, that there are two rival health-care establishments, medicine and osteopathy, the members of which have practically nothing to do with one another. The technics that their respective practitioners employ are to some extent virtually identical, but they have separate colleges—the M.D. institutions superbly equipped and staffed, largely from public funds, and the D.O. schools rather less satisfactorily fitted out and manned, relying upon private gifts and bequests, and leading an almost hand-to-mouth existence.

For the benefit of the public, doctors of medicine want this separation erased, but they think the next several moves in that direction will have to be made by the osteopaths. When the osteopaths have taken those essential steps, and when doctors of medicine and they have agreed to cooperate with one another, some legislation no doubt will be necessary. The time for additional laws, however, is still somewhat in the future.

THE OSTEOPATHS FOLLOWED A FALSE PROPHET

The reason for the separation between osteopathy and medicine is largely historical. Osteopathy was founded, in 1874, by Andrew Taylor Still on the theory that nearly all diseases could be cured by means of manipulation—stretching and relaxing muscles and ligaments, stimulating nerves and correcting the articulation of bones. Moreover, Still specifically denied the efficacy of vaccination, of remedial drugs and, when they had been introduced, of x-ray treatments.

Obviously, or so it seems to us from our Twentieth Century vantagepoint, Still was completely wrong. Though manipulative treatments have considerable adjunctive value, they simply are not capable of effecting cures by themselves. On the other hand, all of the procedures that Still took pains to deride have proved their worth.

Regrettably, the generations of men and women trained in the schools that Still either founded or sponsored have been trapped, quite as other men and women might have been trapped if some of the rest of the well-meaning but mistaken Nineteenth Century medical prophets had established colleges for the perpetuation of their teachings. Still not only had unjustifiedly high hopes for the benefits of manipulative therapy—his osteopathy—but in addition propounded the theory that manipulation was the specific remedy for something that he called "the osteopathic lesion." Because neither he nor any of his followers proved the existence of such a lesion, or for that matter made any serious attempt to do so, and because that theory appeared to be central to the osteopath's credo, the doctors of medicine were forced to regard osteopathy as a cult.

The Code of Ethics of the medical profession forbids doctors of medicine to consult with or assist cultists in the care of patients. Thus, as long as

osteopaths persist in their contention that there is such a thing as an osteopathic lesion, a doctor of medicine may treat one of an osteopath's patients only if it is understood that thenceforth he is to assume complete charge of the case. Ethically, he may not work with the osteopath, as he frequently helps a fellow M.D., nor may he ethically refer a patient to an osteopath.

Doctors of medicine aren't happy about this state of affairs. On the contrary, they would like to see it resolved, for they want the public to receive the better care that would be possible if the two groups were able to cooperate with one another.

OSTEOPATHY IS CHANGING

The osteopaths have been understandably reluctant to break away from Andrew Still and his teachings, but the separation has been started. In July, 1958, they changed the name of their college in Des Moines, eliminating Still's name, and about a year later, in June, 1959, the Iowa Society of Osteopathic Physicians and Surgeons amended its articles of incorporation, eliminating all references to Still. Moreover, osteopaths now say, more often than not, that they practice "osteopathic medicine," rather than osteopathy, and of course nearly all of them now employ vaccination and other inoculations, and prescribe medicines. An article in the September 26 issue of LIFE, which seemed authoritative as well as altogether fair, reported that throughout the country about 12 per cent of them confine their practices to manipulative therapy; another 12 per cent practice medicine without doing any manipulation at all; and the remaining 76 per cent do both.

FURTHER STEPS FOR OSTEOPATHS TO TAKE

What, then, are the remaining obstacles that the osteopaths must remove before cooperation between the two groups can begin?

First, the osteopaths must either prove or abandon the osteopathic lesion and the theory that manipulation can cure it, or indeed anything else.

Second, their schools will have to be inspected and assessed by the same accrediting agency that inspects and assesses colleges of medicine. And then, almost certainly, some improvements will have to be made before that agency will grant them accreditation. Doctors of medicine will be glad to help further this work.

Though instruction in the basic sciences at D.O. schools will probably be judged at least very nearly as good as at M.D. ones, it is almost certain that improvements will be called for in the clinical teaching at osteopathic institutions. After all, there are just six osteopathic colleges in all the world, in contrast with about 85 colleges of medicine in this country alone, and the faculty members who teach clinical subjects at those six schools are osteopaths who themselves got all of their training at one or another of those same six institutions. Thus osteopathy, throughout its entire history, has been quite narrowly inbred. In consequence, when the inspections have been completed and when the other preparatory steps have been finished, it probably will be thought necessary to have some M.D.'s start teaching in the osteopaths' schools, and to have the osteopaths who have heretofore composed those faculties take some courses at colleges of medicine. It doubtless will also be thought advisable, at that time, to start improving the clinical and laboratory facilities, and the libraries, at colleges of osteopathy.

As a third and final step, when the osteopathic schools have been made the equals of the colleges of medicine and when their graduates are granted unrestricted licenses to practice medicine and surgery, an arrangement can no doubt be worked out under which prior graduates of osteopathic schools, after taking additional courses, can be freed of their present restrictions.

CONCLUSION

Doctors of medicine are given unrestricted rights to practice the healing art because they meet certain standards designed to protect the public, and no one can deny that if osteopathic physicians met identical requirements, they should be accorded equal practice rights. But the excellence of a medical education goes deeper than the ability to pass an examination. Excellence of a medical education can be ascertained only through the inspection and accreditation of the school at which that education is secured. Thus, the osteopathic schools must be required to satisfy the same requirements as the medical schools before their graduates are permitted equal practice rights, and the evaluations must be made by the same agency.

As for cooperation between doctors of medicine and osteopaths, that will be possible only when the osteopaths have proved or have abandoned the theories that have caused them to be labelled a cult.

Liaison committees at both the state and the national level are providing for an exchange of ideas between doctors of medicine and osteopaths on how their differences can best be resolved, and at this time further legislation regarding osteopathic practice would serve no useful purpose.

THE DOCTOR'S BUSINESS



Investment Fund Shares For Large Investors

HOWARD D. BAKER

WATERLOO

Much has been written about the benefits that the "average" or the "small" investor can get from investment funds, but there has been a far-too-general belief that the large investor could find no advantage in using them. In reality, however, more and more investors of substantial means are using investment funds as partial or as complete solutions for their investment problems.

Investment-fund shareholders today include many who have put in $100,000 to $1,000,000 or more. These include wealthy individuals and also some organizations such as pension or profit-sharing funds, corporations, churches, schools, hospitals and other institutional investors. Although there are no complete studies available, one of the largest open-end (mutual) common-stock funds, in 1959, reported nearly 300 accounts in excess of $200,000 each.

Why does the large investor put his money into a mutual fund? He presumably can achieve adequate diversification without doing so, and with a portfolio worth $50,000, $100,000 or more, the cost of an investment-counseling service would be reasonable. For the large investor, the convenience of owning shares in one or more funds is an important factor. Consider the numerous—indeed continuous—stock transactions that a $200,000 investor makes. The record-keeping, tax-reporting and general administration would be overwhelming if he were to do them for himself. In contrast, one annual information return from an investment fund would provide data on values, shareholdings, dividends and capital gains. Unless investing is the individual's sole activity, he might find it nearly impossible to manage his stockholdings properly.

Another obvious advantage is liquidity of holdings. The large investor can liquidate all, or a portion, of his holdings in a fund without delay, without disrupting the market, and in effecting a partial liquidation, without sacrifice of diversification. Such is not always the case when a large investor has made individual commitments.

CONTINUITY OF GOOD MANAGEMENT

The more intelligent the investor, the more cognizant he is of the complexities of investment management. It is a continuous and difficult task that requires more than "spare time." He is also aware of the management problems that his death would create, and those that would occur if he made a substantial gift.

One of the objections frequently voiced in any discussion of mutual funds—the 7 to 8 per cent loading charge—is of little consequence to the large investor. The appreciable reduction in loading charge that is available to large investors results in acquisition and selling costs no larger than the brokerage fees on securities of identical value. Generally, this cost will be substantially less for the large investor in mutual funds because his number of transactions must certainly be far smaller than would be necessary if he had put his money directly into stocks.

In addition to the advantages that have been mentioned, probably the single most important attraction of the funds, from the point of view of the large investor, is the availability of past performance records. An investor can readily determine how well a fund has done. No other investment medium can provide a prospective purchaser with so complete a record of just what it has accomplished in the past.

By measuring this performance data against the stated objectives of the fund, the prospective investor can readily determine whether or not a particular fund meets his own requirements.

In today's fast-moving and complex investment world, the investment fund is attractive to the large as well as to the small investor. In many cases, it offers as much—if not more—to the wealthy man who does not have the time, the inclination or the ability to manage a large, diverse portfolio of his own.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

A French revolutionary leader was sitting in a cafe when a crowd of people went rushing by. He suddenly leaped to his feet in excitement and started to leave. "Where are you going?" someone called to him. "I'm not sure," he shouted back, "but I must get to the front. I'm their leader!"

Today, I feel like that revolutionary leader. In our Auxiliary, thanks to a splendid crew of workers, things are moving so fast that instead of leading the way, I repeatedly find myself outdistanced. For example, the ingenious members who devised a plan for district meetings and convention organization are Mrs. N. W. Irving, Mrs. B. F. Kilgore, Mrs. R. E. Hines and Mrs. Louis Goldberg.

Arrangements have been made for pep rallies in eastern Iowa. They seemed to constitute a tremendous project, but with the able assistance of the councilors and county presidents, the dates and places have been determined. On October 11, District VI met at the Fisher Community Center, in Marshalltown. That gathering was a morning coffee under the able guidance of Mrs. J. F. Gerken, councilor. The Marshall County Auxiliary members were the hostesses. October 12 was the date for the District I meeting at the Hotel Winneshiek, in Decorah. Mrs. M. F. Kiesau was the chief organizer, and in addition to the Auxiliary members from Winneshiek and Allamakee Counties, prospective members from the other counties in the district were in attendance. On October 27, we are going to Independence to unite District VII. The members of the Buchanan County Auxiliary and the councilor, Mrs. N. L. Hersey, will greet us at a luncheon in the Pinicon Hotel there. The District VIII meeting is scheduled for November 1, at the Burlington Golf Club, and this too will be a one o'clock luncheon. Mrs. A. C. Richmond will "spark plug" this meeting, in the absence of the councilor, Mrs. G. J. McMillan.

Did you know that your president attended the annual meeting of the Iowa Chapter of the American Academy of General Practice, in Des Moines on September 18-20? Dr. L. H. Jacques, the chapter president, was most apologetic afterward for having forgotten to introduce me from the platform, asking, "How can I ever make it up to you for this omission?" Since Dr. Jacques practices medicine in Iowa City, you may be sure that I had a ready answer for that question. I told him that forgiveness for that oversight would be in direct proportion to the numbers of new Auxiliary members he garners for us in Johnson County this year.

The event of the month was the Conference of Presidents, Presidents-Elect, National Officers and Chairmen of Committees, in Chicago on October 2-5. It would be unfair to the hurried readers of this column if I were to attempt reporting upon it here; it would be equally unfair to the conference itself if I were to give it the light touch that I'm accustomed to using here. But there is one conference thought that I must share with you: Dr. Ernest B. Howard, assistant executive vice-president of the AMA, reminded us that the AMA is for those who help those who need help. Socialists want this same help for those who need it not!

—Mrs. R. F. Nielsen
President

DANGER AND OPPORTUNITY

Some of our members do not have BULLETIN subscriptions. Some of our members get that leaflet but do not read each issue from cover to cover. A peek inside the September issue exposes the president's page called "Danger and Opportunity," where Mrs. Wm. Mackersie warns us: "A crisis is imminent in our lives."

She says, "The Chinese write the word crisis with two characters—one meaning *danger* and the other meaning *opportunity*." The *danger* is that, unless the medical profession continues its well-developed campaign to maintain its position as a key force in the free, private-enterprise system, forces outside of medicine will regulate medical practice.

The *opportunity* which challenges us in this presidential election year is obvious and decisive. The privilege and responsibility of every United State citizen of voting age is to select persons who will be their respresentatives in government. The pillars of our freedom are rooted in the practice of citizen responsibility.

Time is running out, but we have an *opportunity* to make diligent, judicious use of that time. Give of your time and money to the political party of your choice; see that every doctor, the adult members of his family, and the members of his office

staff vote. The only votes counted are those that are cast!

Edward Everett Hale wrote:

"I am only one,
But still I am one.
I cannot do everything;
And because I cannot do everything,
I will not refuse to do the something
that I can do."

One thing you can do is VOTE!

MEETING YOUR MEMBERS

Candidate No. 5
Have Fun
Mrs. G. S. Atkinson

Wouldn't you know another "son" is being reviewed this month? Her introduction will be very brief and not too revealing. (Beware, there is method in all this madness.) Every Auxiliary member in the State of Iowa should recognize her on sight. She has attained a place of leadership in our organization.

There are several items of interest about her which are not apparent when you meet her: that her birthplace was Helena, Montana, does not show at all; there is no white uniform to indicate that she is a registered nurse, nor could one know by looking at her that her husband is an ophthalmologist. She does wear glasses, however!

She is so petite
Has a dimple in her cheek
That promptly gets deeper
When she is with people.

Worked in Alaska
She now lives in Mahaska.
For public health projects
We know her talent fits.

For children, there are two
They're boys! Girls will not do.
The last part of her name,
Gives a clue to this fame.

CORRECTION

In last month's WOMAN'S AUXILIARY NEWS, the report of the District III meeting held at Lake Okoboji on August 22 was mistakenly changed so that it said, in part: "Mrs. D. H. King, of Spencer, was unable to attend, but sent greetings and commended the group for their cooperation." As a matter of fact, Mrs. King attended the meeting. It was her husband, Dr. King, the councilor for the State Medical Society, who couldn't be present but sent a message.

If materials for the successive issues of the NEWS can reach the office in time to permit careful checking at each stage in the process of publication, errors of this sort will be less likely to slip through.

NATIONAL AUXILIARY CONFERENCE

The seventeenth annual conference of Auxiliary officers and committee chairmen, in Chicago, is now history. Those of us who attended it emerged better informed and more enthusiastic Auxiliary members than we were before we went. Reams of notes, stacks of pamphlets and dark circles under our eyes are visible evidence that we were there. But the dark circles aren't the fault of the conference planners. Rather, they are the consequence of the after-hours meetings of the Iowa delegation, for which there are no minutes but at which plans were made until the wee morning hours. You'll be hearing more about those plans.

During the conference, the greatest emphasis was placed on self-preservation and America-preservation. The presentations on these subjects led us to consider specific projects in civil defense and legislation. Dr. Edward R. Annis, of Florida, a member of the AMA Speakers' Bureau, discussed the Woman's Auxiliary's role in Political Action. He said that the number-one issue today is one of basic philosophy: Are we eager to adopt socialism, or are we eager to go forward under free-enterprise. He quoted an article published by Warner Swasey called "Long Shadows," but not being proficient at shorthand, I can give you only the following suggestion of its contents:

"When *small* men cast *long* shadows, the sun is setting."

"When small men *rule* people instead of *serving* the people, the sun is setting!"

Reports on the contributions made by other participants in this program will be coming to you from time to time.

—LILLIAN NIELSEN

"I WISH I COULD BELONG"

Some lessons taught by human nature are commonplace to all of us. As children, we remember, we heard the remark, "Far pastures look greener." As we progressed to adolescence we heard, "Forbidden fruit tastes best." As adults, having learned these adages, why do we refuse to see the holy grail that is at our doorsteps?

We seek to be good wives. We serve our communities, we serve our churches and we serve our schools. All in all, the vast majority of us lead useful lives.

Mrs. Turner, a National Auxiliary past-president, spoke a gem when she said, "Anything I want to do, I can do through the Woman's Auxiliary." She elaborated by saying, "My first love,

my first attention-getter is my church; then the Auxiliary." Through Auxiliary we can work in all areas of health and allied fields.

Whenever I mention the indifference of some doctors' wives to membership or active service in Auxiliary work, some ambitious, attractive, non-eligible wife will say, "I wish I could belong!"

Belonging is just too easy. It is the fruit that is right there for the eating. It is the green pasture where we are.

—L. N.

GOVERNMENT IS FOR YOU

Your life and the lives of your children are influenced and regulated by government. As an American citizen you have been given the privilege of having a voice in vital decisions that influence and regulate your life. The persons whom you elect to political office are this voice that so affects your way of life.

The privilege of being a part of government was deemed worth fighting for by the founders of your country, and succeeding generations have deemed it worth defending. Like all privileges it has entailed responsibilities. These responsibilities are now yours. When you fail to vote, you shirk these responsibilities, and in so doing give away your right in government. Thus, you have refused to make the effort to defend your rights and the rights of your children.

BE SURE TO VOTE! GOVERNMENT IS YOU! . . . WHEN YOU VOTE YOU ARE GOVERNMENT!

—JANET ELLIS
Legislative Chairman

COUNTY AUXILIARIES

Black Hawk

As its September meeting, the Black Hawk Auxiliary met for dinner at the home of Mrs. C. J. Ludwig. The guest speaker of the evening was Mr. Robert Siddens, of Waterloo West High School's guidance and counseling program. He talked on his group's experience in working with students, and told what counselors try to do in helping youngsters in need of advice. The Auxiliary is very proud of the progress being made in the development of such a program, and feels honored that the Waterloo project was mentioned approvingly in a recent issue of CORONET.

The October meeting of the Auxiliary was devoted to the making of final plans for the members' serving as hostesses to the wives of physicians attending the Northeast Iowa Clinical Conference, in Waterloo, October 20.

Mahaska

The Mahaska County Medical Society and its Auxiliary held a joint dinner meeting on Tuesday, October 11, at the Elmhurst Country Club, in Oskaloosa. The local political candidates were honored guests, and spoke during the evening.

The Oskaloosa High School Future Nurses Club met on that same evening, and installed new officers. Four Auxiliary members, Mesdames Alberti, Atkinson, Lederman and Lemon, furnished the cookies for this meeting, decorated the tables, and shared the honor of presiding at the tea table with members of the Nurses Association.

Polk

The Polk County Medical Auxiliary opened its new year with a luncheon meeting at the Standard Club, in Des Moines, on October 14. The program consisted of a discussion of "The Doctor's Wife in the Community" by a panel made up of Mrs. Walter Anderson speaking on the YWCA; Mrs. H. Kirby Shiffler talking on the Children's Home; Mrs. Maurice Noun discussing the Art Center; Mrs. Howard Ellis speaking on politics and legislation; and Mrs. Richard Moore discussing gardening.

With their fall party "Terribly Sophisticated," at the Des Moines Golf and Country Club, the Polk County Medical Society and its Auxiliary succeeded once again in enabling their members and guests to become better acquainted. It was easy for everyone to get into the spirit of the occasion right at the start, for the greeters were ladies dressed in "lack of simplicity" gowns, and sophisticated gentlemen carrying the gold-headed canes of another generation. All of the costumes and accoutrements reflected the theme of artificiality by including such things as extra-long eyelashes, wigs, long strands of "priceless" beads, long cigarette holders and silk hats. The unusual table decorations also served as conversation pieces.

Music was provided by Ben Harrison's combo, by Speck Reed, and by Dr. Richard Paul and his talented son Douglas. The "worldly wise" Dr. Chester Woodburn, the master of ceremonies, awarded door prizes.

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President—Mrs. R. F. Nielsen, 919 Washington Street, Cedar Falls
President-Elect—Mrs. B. F. Kilgore, 5434 Woodland, Des Moines 12
Secretary—Mrs. L. F. Henderson, 304 Seerley Street, Cedar Falls
Treasurer—Mrs. J. H. Matheson, 4321 California Drive, Des Moines 12
Editor of THE NEWS—Mrs. W. W. Sands, 1515-41st Street Place, Des Moines 11

Putting the Blue Cross and Blue Shield House in Order

FRANCIS R. SMITH, *Insurance Commissioner*

COMMONWEALTH OF PENNSYLVANIA

THE TOPIC ASSIGNED to me reflects several assumptions: (1) that I am sympathetic toward Blue Cross-Blue Shield; (2) that the purposes of Blue Cross-Blue Shield are so crystal clear and uniformly good as to warrent the effort needed to put its house in order; and (3) that I can tell you how to do the job. As to such assumptions, only the first can be agreed to readily. I am sympathetic; my career as an insurance commissioner is evidence of this.

I am sympathetic because I believe that the public problem of health-service costs requires public solution and because Blue Cross-Blue Shield comes closest to being sufficiently broad in base to offer the solution. Yet I would not be candid if I did not express some doubt as to your ability to solve the ultimate public problem.

Whether its solution will be within the framework of voluntary, non-governmental agencies, or whether it will be imposed by government is the question now before us all—the public, the doctors and the hospitals. During the next few years, this question will be debated by sincere and honest people. I learned recently that this subject has been selected for intercollegiate debates throughout the nation this year. No better evidence need be introduced as to the prevalence of thoughtful interest in the matter. In the end, if government imposes its solution, mandated as always by the voters, it will be because the doctors, the hospitals and Blue Cross-Blue Shield have not measured up to the challenge of the times.

DOCTORS AND HOSPITALS MUST HELP SOLVE INSURANCE PROBLEMS

Being candid makes me express some doubts as to the willingness of doctors and hospitals to work wholeheartedly with Blue Cross-Blue Shield to solve the public's problem. This is unfortunate, since I am convinced that with the full support of your natural partners, you can solve most of its problem. Make no mistake about it, government is already deep in the matter of financing health services. There will be more of this—not less. Your survival and the survival of private medicine and voluntary hospitals now depend upon your combined skill in working with government.

I said that two other assumptions appeared to underlie my assignment. The second, that Blue Cross-Blue Shield purposes are crystal clear and uniformly good, comes next. How true is this? There can be no question that your plans are nonprofit. Your average cost of doing business, expressed as a percentage of gross revenue, has startled the insurance industry and is a matter of pride to all of your well-wishers. You handle billions of dollars in premium income, and there have been no scandals. Indeed, there have been few fidelity losses of any kind. But are the subscribers' interests the chief concern of your plans? Or are the interests of the hospitals or of the doctors paramount? Has your program achieved balance in this respect, so as to make it crystal clear to the public that your purposes are uniformly good?

Do your contracts provide service benefits, and do the doctors and hospitals help you provide those services at reasonable and competitive rates? Or do the doctors and hospitals consider Blue Cross-Blue Shield as just another insurance company? In this connection, a recent action of the House of Delegates of the American Hospital Association is good news. By providing that two of the 15 trustees of the AHA shall be Blue Cross representatives, it has acknowledged that Blue Cross is a brother in the health-service field, not a stepchild, and this will have many far-reaching good effects. I was glad to note that Mr. George Bell, president of the Wilkes-Barre, Pennsylvania, Blue Cross Plan, was elected as one of the trustees, and want publicly to commend the AHA for its wisdom in making a new set-up and in selecting Mr. Bell.

The third assumption underlying my assignment is that I can tell you how to get your house in order. This I cannot do. As insurance commissioner for the Commonwealth of Pennsylvania and under the laws of that state, I have regulatory duties with respect to the plans. The law permits Blue Cross-Blue Shield to be organized as non-profit corporations, and provides that they may go tax-free because they fulfill public policy. The law goes on to assure the citizens of the state that regulation of these plans' activities will be the responsibility of the insurance commissioner, and that all subscriber rates charged, all benefits provided and

Mr. Smith made this presentation at the 1960 Blue Cross-Blue Shield Management Conference, on October 24, 1960, in Chicago.

all contracts made with hospitals and doctors are subject to his approval.

Nationally, you are now a multi-billion dollar enterprise. In Pennsylvania alone, the premium income of Blue Cross-Blue Shield is in excess of $300,000,000 per year. Last year, our public hearings on Blue Cross matters required four weeks of hearing time, during which thousands of pages of testimony were taken. The complications which were revealed at those hearings resulted in the establishment of a "Governor's Commission on Hospital Service" which will intensively study certain phases of the problem of hospital services and costs in our state. I am this Commission's chairman. Should I now try to tell the plans how to get their houses in order? The known complexities in this field are so varied and numerous—not to mention other facets as yet unknown or unidentified—that I might as well shout into the teeth of a hurricane.

What is the challenge before us all? How well do we understand the ramifications of the public's problem of health care costs? How can you, in your daily work, meet your part of this challenge? It is questions like these that I should like to consider with you. I realize that this group includes relatively few policymakers, but still there are a number of policymakers among you. Furthermore, in your organization as in our insurance department, it is often from the operating group that policies are derived. The creative skills needed to get your houses in order must come from you and others like you in Blue Cross-Blue Shield.

If I cannot tell you what you must do to get your house in order, perhaps I can at least direct your thoughts to what might be done. In our insurance department, we sometimes settle problems by asking questions. When we follow this method, we ask ourselves what is expected of us. What must we do? In this way, we isolate segments of the problem into manageable units. Well, what must you do? What is expected of you? What does the public want of Blue Cross-Blue Shield?

THE PUBLIC WILL TAKE COINSURANCE IN TRADE FOR MORE COVERAGE

The public wants its health-service bills paid. In return, the public is willing to pay reasonable premiums. The public is pretty clear, however, about what it wants. It does *not* want uncertainty of coverage. It wants assurance of the same high level of coverage wherever patients are cared for, and if possible it wants care from the doctor of the patient's choice. It does not absolutely insist upon stability of rate, though obviously it would like to have that sort of arrangement.

How do I know that these are the things that the public wants? Take a look at the federal-employee program recently underwritten in large part by Blue Cross-Blue Shield. The pattern of benefits desired by a great, national cross section of employees should be found in the federal employees' contract. Take a look at your steel and auto contracts. Take a look at the specifications of the various Bell Telephone Company proposals. Take a look at your sources of support. Who writes and speaks for Blue Cross-Blue Shield, other than your associates in hospitals and medicine generally? These are the men and women in management and labor who have worked with you to fashion the kind of coverage desired by those whom they represent.

It has been found that the public will also agree to modest coinsurance payments for health services, if these are reasonably limited and if the coinsurance does not result in inhibiting the use of needed health services. In Pennsylvania our largest Blue Cross plan last year transferred more than half its subscribers to a co-pay basis in one year by limiting all co-payments for inpatient care to $5 per day and $75 per family, and adding outpatient diagnostic service to the benefits under the contract.

The public wants its health insurance dollars used wisely. It is not yet sophisticated enough to be specific in this respect, yet it is only a question of time until it will insist that outpatient benefits be widened and made more generally available at home as well as in the doctor's office or hospital outpatient department. The past-president of the Blue Cross Association, Dr. Basil Maclean, has long and vigorously championed the cause of servicing the vertical as well as the horizontal hospital



HELP FIGHT TB—USE CHRISTMAS SEALS

patient. The results of his efforts and those of others are now being felt.

You may confidently expect the public to be increasingly insistent upon payment of the costs of non-hospitalized illnesses. Included in its concern will be the rates paid by Blue Shield to doctors for care rendered in hospitals and in the patients' homes, and you may expect that these charges will come in for more careful scrutiny. For the public is beginning to understand the problem, and it wants outpatient care to be emphasized.

People are beginning to understand that many hospital days are wasted only because Blue Shield's payment method provides an incentive for hospitalization. They are coming to realize, furthermore, that increased Blue Cross costs are by no means the only ill effects of that overutilization. Subscribers unnecessarily lose days from their employment.

You should note another one of the public's desires. It wants the same kind of protection to be available to all—not just to the good risks, not just to the employed, not just to those who can easily pay the rates. The public is opposed to second-class medicine for anyone, and will not stand for it very long. The Kerr-Mills Act just passed by Congress opens new vistas which I hope you will fully explore.

If these simple observations of mine describe what the public wants, why can't you provide it just as simply? If I could talk with you individually, no doubt we could develop a number of answers. Each of you would view the matter differently. Yet, if our discussions lasted long enough, I think we would all come to the same conclusion: that Blue Cross-Blue Shield could answer the total needs of the public if it had full doctor-hospital cooperation and if its subscriber rates could be kept competitive while the needed changes were being made. The hazard you face is the same as that which confronts an athlete who must pace himself to conserve his energy. If you don't intelligently pace yourselves, other insurers may capture important accounts, the loss of which will imperil your holding what you now have.

Your competition is a real problem that won't "go away" if you simply avert your gaze. It is persistent and insistent. One of the stickiest complications for you is the fact that the public cannot properly weigh the merits of various insurance policies. Its degree of sophistication about insurance matters is still elementary. Your contract looks little different from others in the eyes of too many people. It may be better, but your subscriber has only your word for it, as against the statements of your competitors. You must obtain and retain the public's understanding and confidence. In these days of broadly-based industrial bargaining, the loss of one Blue Cross-Blue Shield group may lead to the loss of 20 others. But how to get understanding and cooperation from your natural partners is the nub of the problem. Unless you gain that cooperation, your competitor will surely be more than insurance companies; it will be the sovereign government itself! Yes, you face a dilemma, but your problem is not unique.

INSURANCE SHOULD BENEFIT THE PUBLIC, NOT THE HOSPITALS AND DOCTORS

At such a point as this in the discussion of our insurance department problems, my staff expects me to use two approaches: (1) Let's look at the history of the thing. (2) Let's get out the idea file to see what has been used to help solve other problems and may serve to overcome the difficulty in the present situation.

What about Blue Cross-Blue Shield historically? How did it come about? The Commission on the Cost of Medical Care, about a quarter-century ago, knew that service benefits to subscribers were the key to a solution of the public's problem as it looked then. *But it was also known and fully accepted that service benefits required sacrifice on the part of hospitals and doctors.* Some of our hospital people and doctors, and some of the plan people too, have forgotten this. Blue Cross plans paying hospitals on the basis of their charges hardly need contracts with hospitals, for no effective regulation is possible. If they have given blank checks to hospitals, they should not now be surprised at how generously the payees have been to themselves. How can Blue Shield plans without a binding contract with the medical profession expect that service benefits will automatically be given to subscribers in exchange for indemnities? This is no way to fulfill the public need! There is no end to the demand for more money in providing health service—if the money is easy to come by. Hospitals and doctors can rightly expect miracles or magic from the plans unless the plans have indicated to them the practical necessities under which they must operate.

As I pointed out, the service principle is not inconsistent with modest co-payments made by subscribers at the times of their illnesses, limited on a family basis to a low annual amount. The service principle does require, however, that hospitals and doctors work out arrangements which are advantageous to the subscribers of Blue Cross-Blue Shield. If these arrangements include no advantage, how will incentives to enrollment be maintained? How will the plans continue to grow in public service? The insistent truth here is that the public purpose of Blue Cross-Blue Shield, to provide service benefits and to maintain coverage for the repetitively ill and the aged, is not realized by the buyers of insurance, nor is it often realized by your natural partners, the hospital people and the doctors. You have done this part of your job so well that it is now accepted as commonplace. Yet to keep your plans sound and to meet the public's need, this responsibility must be freely undertaken by the doctors and hospitals, for their failure to accept it will only lead to more demands for a government program.

As Americans, we believe in free choice of doctor and hospital. This would seem to require *per diem* payment to hospitals and the fee system of payment to doctors. But you should know that there are many organizations in the United States which have already abandoned such arrangements. Consider, for instance, many of the eminently successful labor health clinics. These are all served by physicians on salary. If hospitals are owned by such organizations, hospital support is provided on a budget—not on a *per diem* charge basis.

The limit of the insurance fund's liability is thus neatly determined in advance. If more service must be rendered than was anticipated, the doctors and other health personnel must "make do" with budgeted funds. I emphasize this because it brings an understanding of an important aspect of the service-benefits idea into sharper focus.

Service benefits to subscribers cannot be considered as a principle apart from contracts with hospitals and doctors. This must be understood by all who are involved—the public, the hospital people and the doctors. Without such understanding, you will be expected to perform miracles—to provide two dollars' worth of service for a single dollar.

I stress the point because the standard you imposed upon yourselves—the providing of service benefits—does not of itself guarantee that you are fully meeting your big issue today. Without controls upon your liability, willingly given by hospitals and doctors out of recognition of their interest, in common with you, in the preservation of the private practice of medicine and of voluntary hospitals, you cannot solve the public's problem.

THE SLIDING SCALE OF FEES IS OUTDATED

Let me open the door on this further. Society has given certain prerogatives to doctors and hospitals. It has tacitly agreed with doctors that it doesn't expect the rates they charge to be the same for all people, even for those with similar conditions. The rich may be charged whatever the doctor determines. Society will uphold and even insist upon his right to collect the rate he alone has determined. But in exchange for this prerogative, society has placed upon the man of medicine a responsibility to serve all who come to him for help, regardless of their ability to pay. His oath is such that he cannot withhold service from those who are unable to pay. This is the moral basis for the sliding scale of medical charges.

Prerogatives given by society to doctors can be taken back by society. This is an obvious but important point which you and the doctors and hospital people must not overlook. It is your strength, but it is also your weakness. For as society has organized and developed insurance under which the poor and those with meagre resources are enabled to pay reasonable fees to doctors, the circumstances that required a sliding fee scale have been changed. It may therefore be expected that society's remedy for the imbalance that existed when it required free service for the poor—the sliding scale of charges—will be altered to reflect changed circumstances.

Hospitals similarly have been exempted by society from regulation or even scrutiny with respect to rates charged. Today, one can hardly find two hospitals in the same community with rates that even approximate each other for the same items of service. This is true because hospitals have traditionally financed service provided to the poor out of payments assessed of those who could pay their bills. Not only do the hospitals finance free care this way, but they also use this means to meet the costs of educating young doctors and nurses. Should the sick continue to pay for the sick poor and for the training of young doctors and nurses? Your kind of insurance spreads the cost of hospitalization over many, but it also creates for the hospitals hundreds of millions of dollars which otherwise would not have been available for care. Isn't there a price that hospitals as well as doctors must pay for the service rendered to them by insurance? In simple justice, that price must be full cooperation!

THE PUBLIC MUST BE REPRESENTED IN POLICY-MAKING

I know that some of the points I am making are unpopular. Believe me, I am fully cognizant of the many problems you face in negotiating with doctors and hospitals, and I wouldn't want to add to them. Still, may I remind you that part of your problems are of your own making. Some Blue Cross and Blue Shield plans have outrageously given control of their corporations to the providers of service, without providing for adequate representation of the public in policy-making. The managements of such plans have become captives. They have no alternative but to do what is expected of them.

I don't mean to say that all doctors see Blue Shield only from the point of view of the income it produces for them, nor that all hospital people see Blue Cross only from the point of view of hospital income. These men and women are almost uniformly dedicated to the care of the sick. But most of them have never been required to consider the economic realities underlying Blue Cross-Blue Shield. Only adequate public representation on the boards of directors of Blue Cross-Blue Shield can assure balance—a return to reality. As for getting your house in order, I fear that some of your plans will begin to achieve that only if their corporate structures are changed.

The initiative of Blue Cross-Blue Shield plans, individually and collectively, has an important bearing upon their ability to meet the public's

needs. The recent records of insurance company enrollments indicate that your period of rapid increase in numbers of subscribers has passed. What has happened? Self-analysis may be the first order of business.

Although most plans have reasonably adequate coverage for hospitalized illnesses, the record is not uniform. There are sections where a high level of protection is uniformly provided. Of course, you have done great work in shoring up inadequate areas by means of your syndicates, and in the formation and management of Health Service, Inc., and Medical Indemnity of America. They have helped you to provide a level of benefits everywhere that would otherwise have been impossible. You have also been able to meet the needs of the largest employer—the federal government—in a satisfactory way, and I commend you for this achievement.

I noted recently that of the 78 Blue Cross plans in the United States, 35 are already able to offer major medical coverage. But what about the other 43?

SOME PARTS OF THE PRESENT SYSTEM INVITE WASTEFULNESS

The public wants protection against sickness bills. This goes beyond the cost of the hospitalized illness. It wants benefits and coverage which will provide the most health service for the health-insurance dollar. How long will the public stand for Blue Shield's paying doctors only when subscribers have been hospitalized? The incentive to hospitalize all patients and to create unnecessary costs is actually built into such a program.

Let me quote a few paragraphs from a lead story in the WALL STREET JOURNAL of October 12, 1960:

"The Maryland commissioner scaled down the rate increase sought by the Blue Cross after he had received the results of a survey of 222 doctors interviewed by Opinion Research Corp., of Princeton. More than three-fourths of the doctors believed 'Hospital facilities sometimes are used in an unnecessary or uneconomical manner.' About 80 per cent said they had patients who had requested hospitalization when it wasn't necessary, in most cases to take advantage of insurance. And 11 per cent of the doctors admitted that 'one-fifth or more of their own hospitalized patients are admitted for diagnostic procedures that could be performed in a doctor's office or under hospital outpatient service.' About one-third of the doctors said that unnecessarily prolonged hospital stays are 'frequent.'

"Though Mr. Sears was critical of some of the methodology of the survey, he commented, 'Nevertheless . . . I felt that there emerged a picture of a significant amount of unnecessary hospital use by a sufficiently large segment of the population and countenanced by a sufficiently large portion of physicians to warrant immediate action on my part.'

* * *

" 'Doctors aren't policemen for the insurance companies,' snaps a Seattle doctor. 'I don't send patients into the hospital for a rest cure. But if a patient, who is my customer, wants some kind of optional treatment that comes under the payment plan, it's okay with me. This is a competitive business, and if I object, he goes to the doctor across the street.'

"A gray-haired Detroit doctor bristles when the question is put to him: 'Do you ever hospitalize a Blue Cross-covered patient who might just as well be home in bed?'

" 'You're darn right I do,' he says. 'And it's not because the patient asks me to, either. I put him in the hospital for my own welfare. I could spend all morning seeing just four or five patients if I have to drive all over town to visit them. But I can see maybe 20 in a morning if they're all in the hospital.' "

BLUE CROSS AND BLUE SHIELD PLANS SHOULD CONSOLIDATE

The infinite details as to why the present pattern of Blue Cross-Blue Shield benefits came about are unimportant now. The public wants you to see to it that its health-insurance dollar is used wisely, and the public's emphasis upon governmental programs indicates that its patience is at an end.

The initiative, at one time solidly in the hands of Blue Cross-Blue Shield in creating coverages which met the public's needs, is slipping away. It must be regained if your plans are to meet the challenge of our time. Your programs of inter-plan cooperation—the inter-plan bank, the ability of any subscriber to transfer to any other plan without question and without waiting periods—are examples of efficiency, effectiveness and imagination. But isn't there some way that you could begin developing some nearly uniform benefits for all or the major portion of your subscribers in all locations? This will be the sign of your maturity. When I think of the five Blue Cross plans in Pennsylvania, for instance, and realize that each of them has a different set of benefits, rules and regulations, I don't wonder at the public's impatience.

Perhaps more plans might do well to consider a statewide consolidation of Blue Cross and Blue Shield under one organization. Yes, even in Pennsylvania. I know that state-wide plans operate in some areas very successfully. Is there a valid reason why you should continue to create more problems than you now have? Your competitors are able to use premiums from both sides—hospital and medical-surgical—and sometimes outsell you on this basis. Should you not be planning now, if not for outright integration of the plans, at least for joint rating and some sort of sharing of your common risks? The public doesn't really care how the money is split as between Blue Cross and

Blue Shield. It is concerned only with total costs. Most of your subscribers, indeed, fail to realize that two corporations are involved in their coverage. In order to be competitive, you must be able to use premium income interchangeably. If this means corporate integration of Blue Cross with Blue Shield plans, you should begin to work for it. The hour grows late. If the problems can be solved through joint rating and underwriting, you must lay proper plans, including, where necessary, needed legislative amendments. It won't do for you to wait until the situation is desperate. Here again, timing—the ability to pace your progress—is as important to you as it is to the athlete.

RATHER THAN "GOING AWAY," THE PROBLEMS WILL MULTIPLY

Although life expectancy was but 47 years at the beginning of our century, and was nearing 60 years as recently as the 30's, it is now about 70 years. The continuation of life in the older age group as pain-free as modern doctors can make it has created many new and special problems. Because of the nature of medical advances, their cost and the decreased earning power of our older citizens, these problems belong to the whole of society, rather than merely to those individuals blessed with the extra years. In our society, the family is involved as well as the individual; the state and nation as well as the community.

That these are public—not private—problems is indicated by our government's concern and by the recent passage of the Kerr-Mills Bill to which I have already referred. I cannot overemphasize to you that public understanding of the whole matter of providing high-quality health care and financing it is tragically inadequate. Everyone's single desire is that progress in the control and eradication of disease may continue apace and that the pain-free life span which has already been extended beyond the hopes of even a few years ago may be pushed even further.

The public faces a major dilemma in which only you and others engaged in health insurance can assist—how best to preserve all that is good in our private system of medical care, and at the same time make use of needed governmental help and assistance where it will do the most good. The public is on your side. It wants free choice of doctor and hospital!

It recognizes that the swift medical progress of recent decades has been, in part at least, based upon the freedom that our private system grants to the professions to explore, to study and to put the results of their experimentation and research promptly into effect. In the same way, freedom of the patient to select the practitioner or hospital and the method of insuring against the expenses of medical care have given the entire health field the dynamic quality of American life at its best. How to preserve the rate of progress already achieved—or even accelerate it—must therefore share equal emphasis with the more immediate problem of paying the bills.

Recent figures indicate that the older we get, the more likely hospital care becomes. The results of studies made in Cleveland, Ohio, indicate that individuals in the age group over 65 years now require seven times the amount of hospital care that children under 15 years of age need to have. In other words, this study says that up to our forty-seventh year, each of us uses only half of the total days of hospital care we shall eventually have required. We use the other half of our hospital days in the remaining 23 years of our life expectancy.

This is only a part of the problem. The other significant part has to do with the increasing number of people over 65 years of age. This is not a new observation, but it should be noted. The data on this development from my state indicates that between 1940 and 1950 the population of Pennsylvania grew by 6 per cent, but the number of persons over 65 years of age grew more than 30 per cent, or five times as rapidly as the population as a whole. Between 1950 and 1954, the general population of our state increased 4.6 per cent. Those over 65 years of age increased by 10.8 per cent. Today, 13 per cent of Pennsylvania's people are at the retirement age or beyond, and by 1970 it is estimated that 20 per cent will be in that category. If we think we have medical care problems today, what will be our situation a decade hence if no solutions are found? Be assured, however, that answers will be discovered.

THIS IS THE TIME FOR ACTION

The October issue of HARPER's contains a supplement on "The Crisis in American Medicine." Let me conclude by reading you only the titles of the articles: (1) "The Politics of Medicine," (2) "The Decline of the Healing Arts," (3) "The Patient's Right to Die," (4) "Do You Really Want a Family Doctor?" (5) "A Doctor Prescribes for His Profession," (6) "Medical Research: Choked by Dollars," (7) "Tomorrow's Hospitals" and (8) "Beyond Traditional Medicine." Need I say anything more?

This is but one popular magazine. The same thread of impatience, of high interest coupled with a need for better understanding, of willingness to experiment and to follow leadership devoted to the public's purpose can now be found in all publications.

May I suggest that only by fulfilling the public's desire for full health-care protection can you put your house in order. But may I also warn you that the time is getting shorter every month. Two years from now, the decision you should now be making may be pathetically too late. It will then be too late for a full utilization of the creative skills that you and your associates in Blue Cross-Blue Shield have demonstrated; too late for private medicine and voluntary hospitals; too late to put your house in order!

Scientific Articles

A Rare Combination of Female Breast Tumors

Case Report of Cystosarcoma Phylloides and Carcinoma

MERLE J. BROWN, M.D., F.A.C.S., DAVENPORT

A RARE COMBINATION of surgical lesions occurring in a patient creates an intense interest for the surgeon and the pathologist. The purpose of this paper is to report such a case and to review the literature concerning the simultaneous occurrence of cystosarcoma phylloides and carcinoma of the female breast.

The classification of carcinoma of the female breast has been standardized, and the students of pathology do not try to change it. However, cystosarcoma phylloides mammae, an uncommon lesion, has been described for 131 years by various authors, with the result that it has more than 25 different names. Johannes Müller first called it cystosarcoma phylloides in 1838. Pack and Ariel[1] recently have renamed it "giant intracanalicular myxoma," but although their term may be more pathologically exact, it has not supplanted the historical nomenclature.

Ross,[2] in 1952, found 229 cases of cystosarcoma reported in the literature, and recited seven of his own. This lesion was uncommon over 100 years ago, but its frequency has been reduced further because the modern surgeon removes all breast tumors, including fibroadenoma as the precursor of cystosarcoma phylloides. Nelson[3] has reported a lesion in a 46-year-old woman. This lesion weighed 4 Kg. and was unusual because of its massive ulceration. Horton and Baker[4] reported that cystosarcoma phylloides has rarely been seen in the male breast. Slaughter and Peterson[5] told of a patient who had recurrent miniature lesions of cystosarcoma phylloides which required a simple mastectomy to effect a cure. Willis[6] has stated that the carcinomatous changes in fibroadenoma are rare, but that these two lesions may coexist in the same breast.

There is a general agreement of authors that adenofibroma or fibroadenoma is the progenitor of cystosarcoma phylloides. Haagenson[7] stated that adenofibroma is the third most common breast tumor. He noted that it is a disease of the young with greater frequency in colored women. The average age incidence is 33.5 years. He also noted that adenofibromas may be multiple in one or both breasts. Haagenson reported bilateral cystosarcoma in a colored girl which had begun at the age of 13 years.

Pack and Ariel[1] have ascribed to Reinhardt the first demonstration of the origin of cystosarcoma phylloides from fibroadenoma. Although cystosarcoma phylloides is generally considered a benign tumor, some variants of the lesion have been shown to be locally invasive, as reported by Cooper and Ackerman.[8, 11] Metastasis to axillary lymph nodes, the pleura and the lung may occur.

The histologic transition of a fibroadenoma to cystosarcoma phylloides (giant intracanalicular myxoma) is well expressed by Pack and Ariel[1] as follows: "The inner or subepithelial layers of pericanalicular connective tissue participate more actively in the growth of the tumor than do the outermost connective tissue layers, in consequence of which buckling or folding of these inner layers occurs, and the rounded or papillary projections of periductal tissues are invaginated into the lumina of the tubules." The factors of the sex cycle, pregnancy and lactation are the stimulants known to enhance epithelial and stromal proliferation of the

Dr. Brown made this presentation at the annual fall meeting of the Iowa Academy of Surgery, New Inn, Lake Okoboji, September 10, 1960.

breast, and contribute to the growth of fibroadenoma and cystosarcoma phylloides.

The pathologic descriptions of various authorities for giant intracanalicular myxoma are long and detailed. Essentially, the tumor is large, rather firm and irregular. On cut section, the cystic cavities are filled with multishaped and multicolored projecting masses of gelatinous-like tissue. There may be scant amounts of thick mucus within the cyst cavities. Massive amounts of tissue within the general capsule of the lesion prohibit accumulation of much fluid within the cyst spaces. Most authors have stated that microscopically the myxomatous appearance of the stromal tissue is the most constant feature of the cystosarcoma phylloides. Hyperplasia and proliferation account for the large size of the lesion. Ducts are dilated and tortuous without true acini being present. Clefts produced by huge shelves of tissue are lined by cuboidal or pavement-like cell epithelium. Multipolar giant cells, hyaline changes and calcareous deposits may be found within the tumor. There may be areas of necrosis in large, rapidly growing tumors.

Bilaterality of breast tumors is not common. Behan,[9] in discussing carcinoma, has stated that these lesions may be present in both breasts in two per cent of patients. When such a situation occurs, the cancer in one breast is further advanced than the cancer in the other breast. This incidence will probably obtain when cystosarcoma phylloides occurs in both breasts simultaneously.

The coincidental occurrence of cystosarcoma phylloides in one breast and cancer in the other breast has been reported once before by Lee and Pack.[10] Their patient was a white, 52-year-old married woman who had borne one child. She had noted a small tumor in the lower segment of the right breast at the age of 12. This tumor had increased gradually until five years before her hospital admission, and then it had begun growing very rapidly. At the onset of rapid growth, a lump appeared in the upper half of the left breast which reached orange size and came to involve the skin. The right breast was treated by simple mastectomy, and the left by radon implantation and radical mastectomy. The patient died about two years later. The tumor of the left breast was a carcinoma showing necrosis. The right breast tumor was cystosarcoma phylloides.

CASE REPORT

A 49-year-old white female was first examined May 19, 1959. Her chief complaints were some irregular menses, and she thought she must be going through the change of life. She inadvertent-

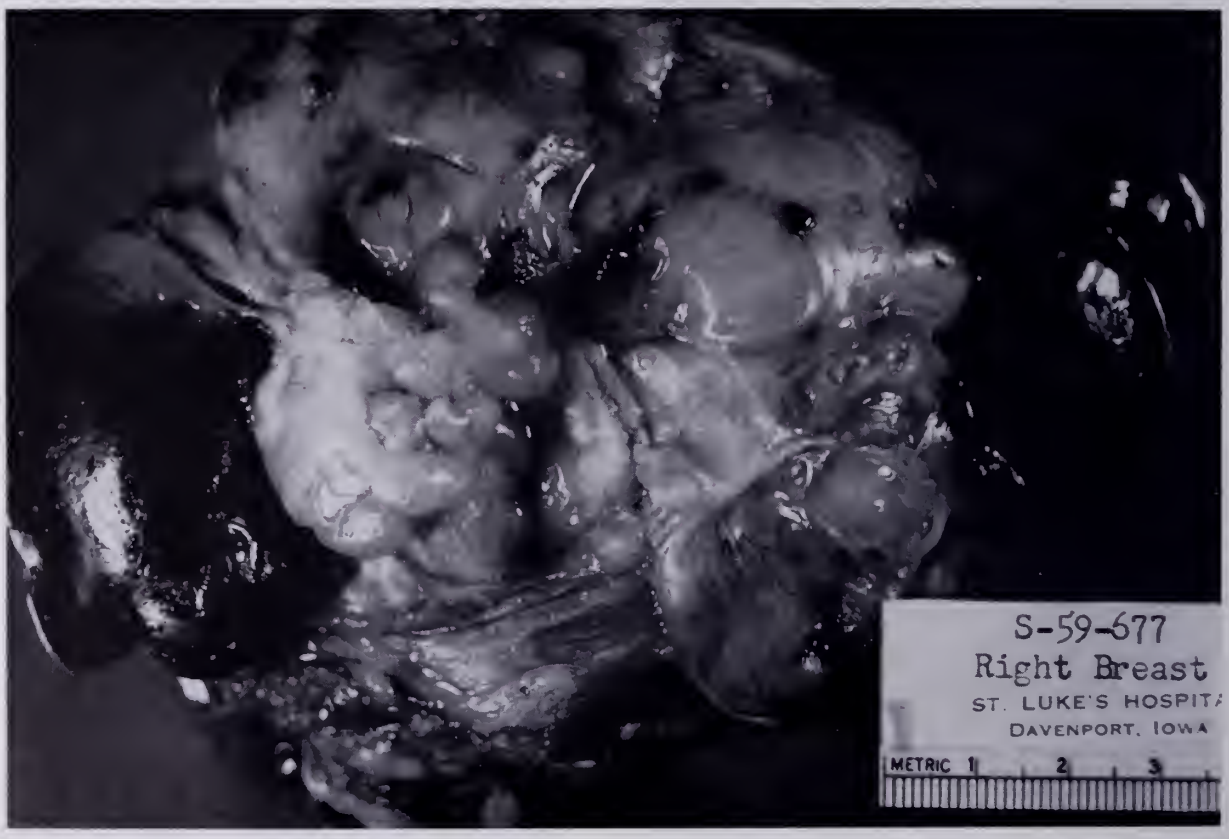


Figure 1. Photograph of the cystosarcoma phylloides of the right breast, cut section.

ly mentioned having had a lump in her right breast for some 15 years, and said that this breast had been sore for about two weeks. She added that she and her family had been getting their general medical care from a chiropractor who had told her the lump in her right breast was unimportant unless it began to grow. She did not seem concerned about her breast tumor, but wanted some relief from her hot flashes. The chiropractic treatments apparently did not help these symptoms.

The general physical examination did not demonstrate any abnormal findings except for those in the breasts. The right breast contained a firm and tender, baseball-sized mass in the upper outer quadrant. The nipple and the overlying skin were not altered, and there was no apparent fixation of the mass. The axillary nodes were not palpable on the right. The left breast contained a smaller mass in the upper outer quadrant. This lesion was more firmly fixed to surrounding breast tissue, but the overlying skin and nipple were unaffected. The axillary nodes on the left were not palpable.

This patient was operated upon May 21, 1959. Biopsies of both breasts were performed. The lesion on the right was completely removed and was considered benign, but the lesion on the left was diagnosed as being malignant. A left radical mastectomy was performed subsequent to the receipt of the frozen section report from the biopsy. The pathological descriptions and discussion will appear in the following paragraphs. Examination of this patient in July, 1960, showed no evidence of recurrence of the tumors of either breast.

PATHOLOGIC FEATURES OF THE BREAST TUMORS

The tumor of the right breast is shown in Figure 1. In the gross description of this lesion, it was noted that the mass of breast tissue measured 10 cm. in its greatest diameter and weighed 190 Gm. Bisection of this breast tissue showed an ill-defined central mass which was markedly variable in characteristics from one area to another. The cut section showed cystic areas which were lined by thin, glistening, gray walls, and which had papillary and polypoid projections into the cystic lumina. These projections into the lumina occupied nearly the entire space within the cyst and encroached upon the walls of the cystic spaces. One large polypoid projection was hemorrhagic and showed partial necrosis. The areas of the tumor not involved by the hemorrhagic process were markedly glistening and homogenous.

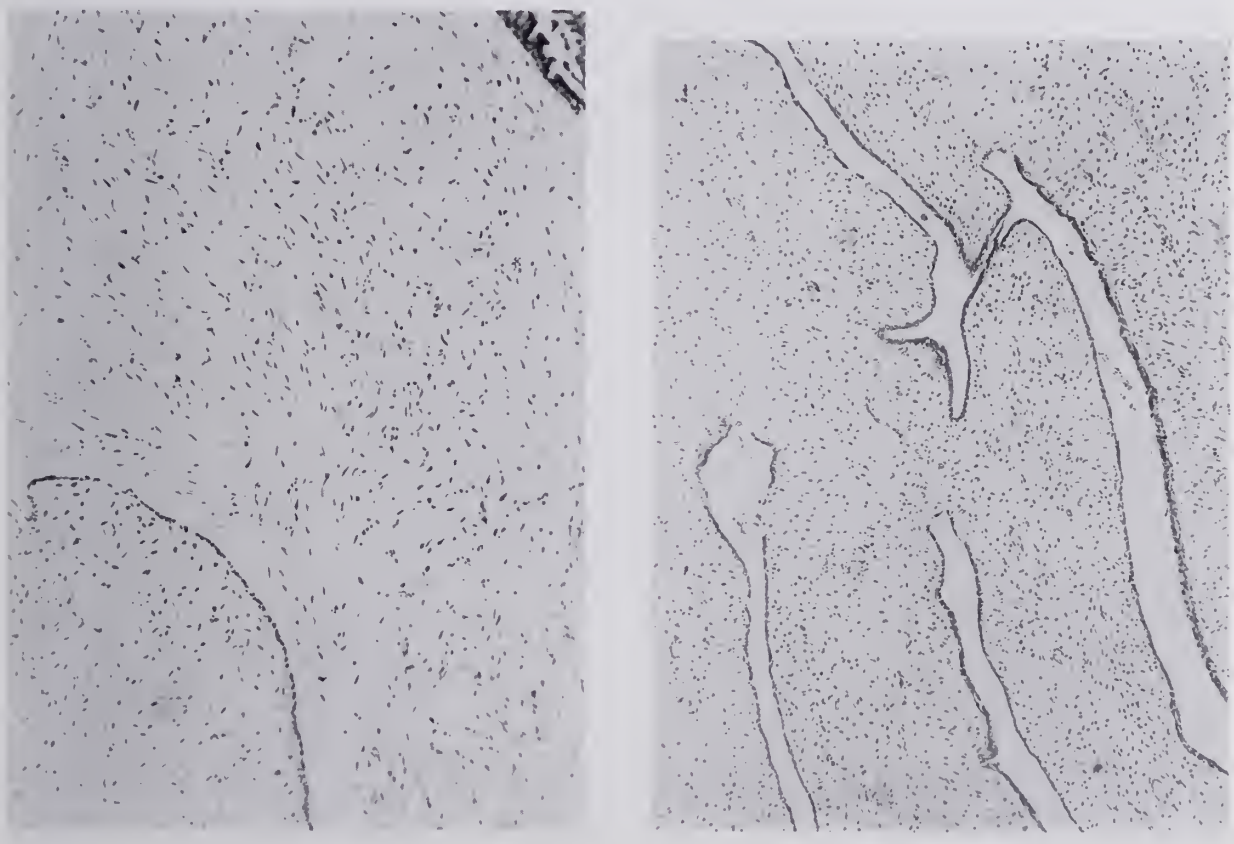


Figure 2. A. Photomicrograph of cystosarcoma phylloides of right breast showing massive stromal tissue, fibrosarcomatous in appearance with minimal epithelial elements. B. Another photomicrograph of cystosarcoma phylloides, showing narrow clefts surrounded by stromal tissue.

The photomicrographs of this tumor shown in Figures 2A and 2B demonstrate the histologic characteristics of the lesion. The large intracystic masses are composed of blue-staining connective tissue having papillomatous configurations and being covered by ductal epithelium. In some areas, the ducts were embedded in connective tissue and were lined with piled-up epithelium. The stroma was extremely variable, with some areas being highly cellular and composed of large nuclei. These structures were spindle-shaped, stellate or oval. The cytoplasm shows extensive vacuolization and myxomatous characteristics. The gross and microscopic features of this tumor were interpreted as those of cystosarcoma phylloides.[12]

The tumor of the left breast is shown grossly on the plane of its cut section in Figure 3. The ink dot shows the center of this lesion. The biopsy specimen consisted of a mass of adipose and connective tissue with interspersed breast tissue. The mid-portion of the tissue mass outlined a poorly defined rounded area, the greatest diameter of which was 1.5 cm. The cut surface was slightly puckered by trabeculations of fibrous tissue, and presented a gray, granular appearance. The axillary lymph nodes accompanying the breast included only one with neoplastic characteristics.

The photomicrograph of the left breast tumor is shown in Figure 4. The section of tissue showed atypical epithelial cells exhibiting pleomorphism, hyperchromatinism and numerous mitotic figures. There was extensive infiltration of the stroma. The gross and microscopic features of this tumor were interpreted as those of an infiltrating duct carcinoma.[12]

SUMMARY AND CONCLUSIONS

Some historical data about cystosarcoma phylloides have been reiterated. Many authors agree that fibroadenoma is the precursor of cystosarcoma phylloides. The histologic features of the lesion have been outlined.

Bilaterality of breast tumors is not common. Only one previously reported case had cystosar-

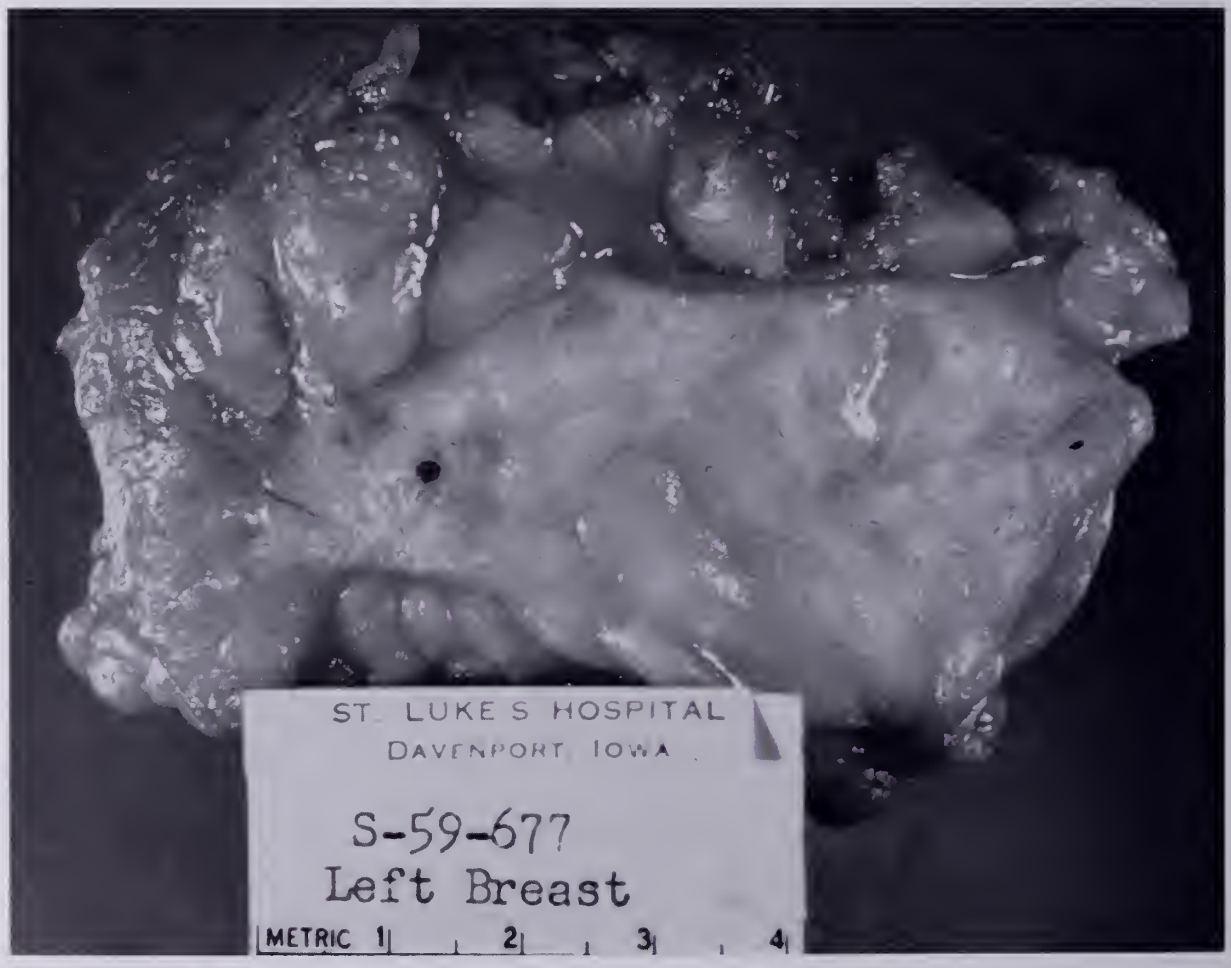


Figure 3. Gross photograph of the cut section of the duct carcinoma of the left breast. Note the striations of fibrous trabeculations radiating through the neoplasm.

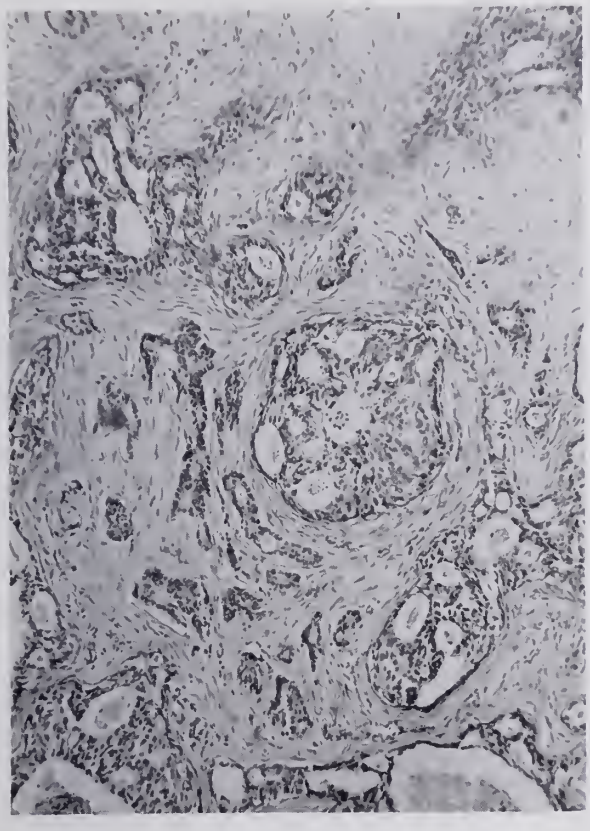


Figure 4. Photomicrograph showing typical cellular pattern and evidence of infiltration of the duct carcinoma of the left breast.

coma phylloides of one breast and carcinoma of the other. A second such case has been reported here.

Photographs and photomicrographs have been presented to show the pathological characteristics of the two breast lesions of the case reported.

The appearance of cystosarcoma phylloides in one breast and carcinoma in the other breast of a female patient is a rare combination.

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PROPOSAL FOR CREATION OF "SOBRIETY BOARDS"

Professor Harold A. Mulford, director of the S.U.I. Division of Alcoholism Studies, made some suggestions for organizing and financing a program for dealing with the medical and social problems of problem drinkers, on October 29, at the Eighth Annual Pharmacy Seminar, in Iowa City. The State Liquor Commission, he pointed out, reported a total profit of $10,000,000 for last year, and there was a similarly large tax take for the state from beer. A considerable share of that money has been or will be used for the support of miscellaneous functions of government, but he expressed the opinion that some of it should be set aside to help meet the costs of alcoholism.

Specifically, Mr. Mulford proposed that the state see to it that no alcoholic fails to secure medical attention because of an inability to pay for it, and for that purpose he said he would like to see the Liquor Control Commission's future profits held in escrow until such time as it is needed to aid people who lose control of their drinking. A reasonable guess at the cost of such a program, he declared, would be $100,000 a year.

He also suggested that the Commission should establish a sobriety board in each community or at least in each county. Such groups, each composed of a physician, a lawyer, a clergyman and a recovered alcoholic with knowledge of Alcoholics Anonymous, would serve as referral, informational and educational centers. They would do educational work with schools, civic organizations and industries, and would also work with researchers and make yearly reports on the alcohol problem in their respective communities. They would tell patients and their families to seek help from at least one of the following sources: A.A., psychiatrist, clergyman, mental health center or state mental health institute. Mr. Mulford asserted that the boards should have coercive powers that they could use in dealing with difficult cases.

To supplement the knowledge that physicians and hospital personnel can acquire through experience in trying to help alcoholics, Mr. Mulford proposed that the State Psychopathic Hospital at S.U.I., or the state mental health institutes should send demonstration teams to general hospitals for the purpose of showing that patients of this type, if they present no special problems, can be handled satisfactorily in a general hospital setting. He would have the expenses of these demonstration teams paid for from the Alcohol Control Commission's profits. This or any other action program, he said, should contain a built-in evaluation procedure.

Malignant Carcinoid Syndrome

JAMES S. BENEDICT, M.D.

DES MOINES

THE MALIGNANT CARCINOID syndrome is rare, and preoperative diagnosis of it is uncommon. Multiple, vague symptoms obscure the deep-seated, underlying tumor and baffle clinicians despite their increasing awareness that the syndrome is a possibility. The recent literature contains reports of isolated cases, but their overall numbers are not large.

CASE REPORT

An interesting case of malignant carcinoid syndrome was recently seen on the surgical service at Iowa Methodist Hospital, Des Moines. M. S., a 49-year-old white housewife, was admitted on October 11, 1959, with the chief complaint of "hot flashes." She had undergone appendectomy at the age of 17, unilateral oophorectomy and bilateral salpingectomy at age 21, contralateral oophorectomy and hysterectomy at age 29, and cholecystectomy at age 37.

Her present complaint had begun two years before admission, when she noted "flushing of my face while I was drinking a beer." For three to four months prior to admission, marked flushing of the face had occurred upon ingestion of a medication containing alcohol. Occasional pains in the left side of the abdomen had been noted, with a gradual increase in nervousness and some flushing attacks. In the week of her admission, spontaneous attacks had occurred every one to three days. She said that an increase of blurred vision had been apparent to her, but she denied having experienced melena, diarrhea, dyspnea or jaundice.

She was seen by her gynecologist, who palpated a 5 x 6 cm., firm, slightly fixed tumor in the left adnexa. A persistent hypertension of 190/110 mm. Hg was found by several observers. Her physical examination on admission was essentially negative, except for slight obesity, a ruddy complexion, the elevated blood pressure and the pelvic tumor described above.

Her average blood pressure reading in the hospital was 150/90 mm. Hg, and it wasn't affected appreciably by manipulation of the tumor. A regitine test and an electrocardiogram were normal. Chest x-ray and intravenous urograms were also normal.

Two days later, an exploratory laparotomy was performed. A grisly, firm, granulomatous reaction was found in the omentum, firmly bound down by adhesions to the pelvic floor. This reaction was believed to be the clinically palpable mass. Biopsy showed a severe tuberculoid-type granulomatous reaction, though no acid-fast or talc bodies were found, even with the aid of polarized light and special stains. Further exploration revealed a 1 cm. palpable mass in the distal ileum, and a second 0.5 cm. nodule on the opposite wall of the ileum. Palpation of the liver revealed several 3-4 cm. nodules scattered over the dome of the right lobe. Several enlarged regional nodes were palpated in the adjacent mesentery. The distal ileum was resected 4 cm. from the ileocecal valve, and a primary ileo-ileal anastomosis was carried out. The pathologist reported a large infiltrating argentaffin carcinoma of the ileum, with a second, smaller primary lesion also infiltrating the intestinal wall. The regional lymph nodes showed secondary extension.

Postoperatively, the patient did well, with one severe flush in the recovery room, but no others. A 24-hour urinary 5-hydroxyindole acetic acid measurement was done on the day of surgery and was reported as 42.5 mg. (normal: 2-9 mg.). The patient had an uneventful course, except for a peculiar discoloration of the superior skin edge, which gradually healed by secondary intention. Her vision spontaneously improved, and she was discharged on the tenth day, having normal bowel movements and no recurrent flushes. Follow-up studies after her discharge showed only occasional bouts of dizziness.*

BIOCHEMICAL DISCOVERIES

In 1888, Lubarsch first described a tumor arising from the crypts of Lieberkuhn in the small intestine. Ransom reported a case of a malignant tumor of this sort in the ileum, with metastases, in 1890. Oberdorfer first designated them "carcinoids" or carcinoma-like tumors in 1907. Other names for them include "argentaffin cell carcinomas," "argentaffin cell tumors," "chromaffin cell tumors," "gelbe-Zellen cell tumors" and "Nicholas and Schmidt cell tumors." Some confusion arose after Masson and Grosset demonstrated the origin of the tumors from the Kultshitsky cells in the crypts of Lieberkuhn. They suggested in 1914 that these tumors might have some neuro-humoral significance.

Cassidy described a symptom complex in 1931 including flushing, cyanosis, pulmonary stenosis, diarrhea, abdominal pain and a painful, knobby liver. However, it was not until 1952 that Biörck

Dr. Benedict is a resident in surgery at Iowa Methodist Hospital.

* One year after discharge, she was having occasional hot flashes which were controlled with low doses of Butisol. A urinary 5-hydroxyindole acetic acid measurement on June 2, 1960 was normal. She still has no liver palpable.

associated this group of symptoms with metastasizing carcinoids. Since the early 1930's extra-appendiceal carcinoids were known to metastasize frequently, but association with the clinical syndrome coincided with further research into the chemical substances produced by the tumors.

The first significant biochemical step in the exploration of these tumors was the demonstration, by Rapport in 1945, that serotonin in the blood is the same as 5-hydroxytryptamine (5-HT). In 1952, Erspamer isolated enteramine and proved that it also is 5-hydroxytryptamine. When Lembeck showed that carcinoids contain 5-HT, in 1953, the logical conclusion was that this substance is directly responsible for the clinical syndrome described the year before by Biörck. As Pastras said, "It is always gratifying to be able to correlate the pathophysiology of a disease process with its clinical expression."

The development of the chemical theories behind the syndrome has attracted the attention of numerous biochemists, and they are continuing to do extensive research. As a result of their studies, the generally accepted theory of the cause and effect relationships can be outlined. The amino acid tryptophane is converted by a decarboxylase enzyme system in the Kultshitsky cells to 5-hydroxytryptamine (serotonin) which is then secreted into the blood stream. The 5-HT is then taken up by platelets, or perhaps circulates freely in the serum. It is then carried directly to the liver via the portal system. Excessive amounts may be delivered into the hepatic venous system by multiple malignant foci in the liver parenchyma, causing an unknown effect upon the endocardium and valves of the right heart. While passing through the lungs, 5-HT is converted to 5-hydroxyindole acetic acid (5-HIAA), an innocuous substance excreted in the urine. If 5-HT is present in large amounts, it also enters the brain, where another monoamine oxidase system again inactivates serotonin to 5-hydroxyindole acetic acid (5-HIAA). The normal blood value of 5-HT is 0.03 to 0.40 micrograms per cubic centimeter, and the normal 24-hour urinary excretion of 5-HIAA is 2-10 mg. The greatest physiologic source of serotonin (5-HT) is the gastrointestinal tract. Other sources are the nervous system, the platelets, the mast cells, the lungs and miscellaneous other body cells.

The exact mechanism of production of the malignant carcinoid syndrome is not known, though several investigators have found a distinct relationship between blood levels of 5-HT and the severity of symptoms. Feldberg and Smith, in 1953, felt that the metabolic effects of serotonin are due to the liberation of histamine from tissue cells. Snow *et al.* demonstrated in 1955 that there is no significant rise of histamine in these tumors. Daugherty *et al.*[10] suggested that epinephrine and norepinephrine pressor amines are not involved in the generalized reactions.

DIAGNOSIS

The necessary criteria for the diagnosis of the syndrome, as outlined by Beaton, are: (1) a carcinoid tumor with metastases; (2) episodes of flushing, with telangiectases of the skin; (3) sclerosis of the tricuspid and pulmonary valves, with tricuspid insufficiency and pulmonic stenosis; and (4) associated symptoms of diarrhea, abdominal pain, dyspnea, arthritis, edema and pellagra. Pastras classifies the syndrome according to the effects of the high blood serotonin levels upon (1) the skin, with paroxysmal cutaneous flushing; (2) the gastrointestinal tract, with diarrhea; (3) the lungs, with asthmatic wheezing and dyspnea; and (4) the heart, with endocardial thickening (also seen incidentally in South African Bantus whose diet is low in tryptophane).

Carcinoid tumors are rare. There were only seven cases in over 15,000 major surgical procedures during a five-year period at our hospital. Peskin and Orloff reported an incidence of 0.08 per cent, or 138 in 175,891 cases. McDonald had 21 patients with proved liver or lung metastases from carcinoid tumors, and only four (19 per cent) had the malignant carcinoid syndrome. Appendiceal carcinoids are considered common, but Collins studied 50,000 appendectomies and found an incidence of only 0.522 per cent. The incidence of metastases from appendiceal tumors is even smaller. Uihlein and McDonald found spread in only one of 110 cases. We had one patient who was found to have metastases at reoperation, the initial appendectomy having been done incidentally at the time of a tubal ligation.

Extra-appendiceal tumors were more commonly associated with malignant spread to other organs. Richie and Stafford reported a 37.9 per cent rate of metastasis in their series of extra-appendiceal tumors. Whether the relative frequency of such metastases follows from the fact that they are searched for, or whether they are found in larger numbers because of some inherent difference in the appearance and action of the tumor cells remains to be elucidated. Perhaps the tumors arising in the appendix give rise to symptoms sooner. Other peculiarities have been noted, such as the occurrence of multiple primary carcinoid tumors, the association with other malignant processes, the location in the stomach and the rectum, and the symptomatic lesions without metastases.

The pathological changes were well described by Adamson and Postlethwait. Grossly, the tumors are characteristically pale yellow or grayish tan in color, and occasionally ulcerate the mucosa. The mucosa contains a usually longitudinal mass that is easily palpable. The serosal surface is least involved, though it frequently presents a typical indenting "pucker."

Microscopically, the tumors contain a small cell, of constant size and differentiation. They are regularly oval-to-wedge in shape, and have cytoplasmic granules with silver reducing qualities. Only

in wildly malignant cases are mitotic figures seen. Cords, rosettes, long strands and even pseudoacinous formations may be present. The cell membranes are indistinct, and the stroma is composed of tightly organized fibrous tissue with little vascularity. Benign and malignant tumors cannot be differentiated on a cellular basis. They have no true capsule, and the tumor in the lymph nodes is identical with that which is found in the bowel wall.

The clinical manifestations of carcinoid tumors are in most instances incidental to those of other clinical diseases. Ariel, in reporting 74 cases, has stated that 24 per cent of small-bowel carcinoids are symptomatic. Bleeding obstruction and vague ulcer symptoms are usually the presenting complaints. The other three-fourths are incidental to other findings and complaints.

The diagnosis of the malignant carcinoid syndrome is made as the result of a high index of clinical suspicion plus qualitative and quantitative tests for urinary 5-hydroxyindole acetic acid (5-HIAA). The characteristic skin flush is divided into three stages by Thorson: (1) reddening and burning, beginning over the face and spreading to the trunk and extremities; (2) a tachycardia and slight increase in diastolic blood pressure beginning when the flush is complete; (3) a pronounced cyanosis succeeding the redness; and (4) a gradual subsidence of all symptoms. The flush has frequently been triggered by the ingestion of alcohol or other peripheral dilators, as was the case in the patient whom I have described.

Routine laboratory studies, electrocardiograms and chest x-rays are of little help, even in the cases presenting primarily as heart lesions. The association of the above symptoms with a diarrhea or other vague gastrointestinal complaints should arouse the clinician's suspicion.

TREATMENT

Treatment has been largely surgical, with excision of the primary tumor and, recently, of secondary metastases of the liver. The fact that excision of the primary tumor and the involved regional nodes has been helpful in reducing the flushing attacks has been documented in some reported cases. Our patient received marked benefit from the resection. In other instances, the resection has not altered the immediate or the eventual course. Most treatment is ineffectual when the liver is already full of metastases.

Temporary relief of ascites has been reported with radioactive gold, though radiotherapy is fruitless. Antihistamine therapy is of value only if the blood histamine is demonstrably high. Potent serotonin antagonists have been isolated *in vitro*, but there is no conclusive proof that they have helped the clinical syndrome. BromLSD, dibenylene and chlorpromazine have all been used without much success. Unfortunately, by the time the clinical syndrome presents itself, the tumor has already spread to hopelessly inoperable areas.

CONCLUSIONS

1. The malignant carcinoid syndrome is rare, easily recognized if one thinks to look for it, and readily diagnosed by means of a urinary test for 5-hydroxyindole acetic acid.

2. Carcinoid tumors are usually found secondary to some other clinical disease, and rarely produce symptoms by themselves.

3. Surgical removal of non-metastasizing tumors results in cure. Resection of the primary tumor with as many of the metastasizing growths as possible may give long periods of clinical remission.

4. Chemical and drug therapy is largely ineffectual in the treatment of the malignant carcinoid syndrome.

5. Further biochemical research on 5-hydroxytryptamine may reveal its mechanism of action, and perhaps a chemical cure for the malignant disease can be found.

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Carcinoma of the Cervix and Pregnancy

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THE COMBINATION OF carcinoma of the cervix and pregnancy oftentimes presents problems that must be solved by various members of a medical team. The skills of the general practitioner, the gynecologist, the radiotherapist and the surgeon are frequently required for the total care of these unfortunate women. Cervical cancer has been viewed as a preventable disease in the past decade, and yet the overall five-year survival rate still remains at 42.8 per cent.[1] There is little doubt that this figure could be brought up to the 80-90 per cent range, however, through the use of the present means of cancer detection which any physician can employ. Pregnancy coincident with cervical cancer should not make these concepts any less valid.

Several authors[2-5] have pointed out that carcinoma has no effect on the pregnancy and that pregnancy has no effect on cervical cancer. Others[6, 7] feel that pregnancy worsens the prognosis. Sadugor[2] and associates report one of the largest series, in which 78 out of 124 cases were available for a five-year study. This group reported almost identical overall five-year figures for pregnant (26.9 per cent) and for non-pregnant (27.5 per cent) individuals. Maino and Mussey[8] reported a 30 per cent five-year survival in 20 cases. Hayden[3] reported a 54 per cent five-year salvage in 11 cases. Prystowsky and Brack[9] reported five of seven (71 per cent) patients alive among those followed five years or longer. Stander and Lein[5] reported a 43 per cent five-year salvage in 16 cases.

Our own experience has left us dissatisfied with the treatment of cancer of the cervix and pregnancy. It is our purpose to review the cases treated at the Ellis Fischel State Cancer Hospital, and to point out significant factors which are possibly related to our lower survival rates.

MATERIAL

Thirty-nine cases of cervical cancer associated with pregnancy have been seen at the Ellis Fischel State Cancer Hospital from 1941 to 1959. These patients are referred from all localities in Missouri for diagnosis and treatment by any physician.

FINDINGS

Incidence. During the years 1941 to 1959, a total of 1,690 cases of carcinoma of the cervix were seen at the Ellis Fischel State Cancer Hospital. Thus, the incidence of cervical cancer associated with pregnancy was 2.2 per cent for this series of cervical carcinomas. Since there is no obstetrical service at this hospital, we have no first-hand evidence to report on the frequency of cervical cancer in an unselected series of pregnancies.

Age. The average age of patients was 32.7 years. The youngest was 26 and the oldest 42 years. All were white multigravidas, and the majority had four to six children.

Symptoms and Duration of Symptoms. It is well recognized that bleeding and discharge are late symptoms of cervical cancer. However, with pregnancy, discharge is a rather common finding, and bleeding is usually thought of as a complication of the pregnancy. Yet, two patients or 5 per cent of the series had no presenting symptoms, one having a Stage I and the other a Stage III lesion. Sadugor and associates[2] reported 8 per cent of their series had no symptoms.

Staging. The Ellis Fischel State Cancer Hospital contributes to the Annual Report on the Results of Treatment in Carcinoma of the Uterus. Therefore, all untreated lesions were staged according to the League of Nations Classification:

Stage 0	1 case
Stage I	7 cases
Stage II	6 cases
Stage III	8 cases
Stage IV	6 cases
Postoperative persistence	6 cases
Postirradiation persistence	5 cases
Total	39 cases

Gestation. Only five patients were pregnant at the time of treatment—one of them in the first trimester and four of them in the second trimester. There were none in the third trimester. There were 19 patients within the first year of the postpartum period. Therefore 19 out of 24 (80 per cent) of the patients receiving primary treatment were postpartum, and 5 out of 24 (20 per cent) were pregnant.

TREATMENT AND RESULTS

Of the 39 cases, 15 have been omitted from statistical consideration for the following reasons: Six were postoperative recurrences, following surgery performed elsewhere; five were postirradiation recurrences who had their first radiotherapy elsewhere; two patients signed out against advice during treatment; one patient went elsewhere for her primary treatment; and one patient's lesion was a carcinoma *in situ*.

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The patient with the carcinoma *in situ* had a suspicious lesion of the cervix subjected to a four quadrant biopsy at 16 weeks' gestation. The pathological report was carcinoma *in situ,* and she was observed through her pregnancy and delivered vaginally at term. In February, 1958, six months postpartum, a conization of the cervix was performed, and it again showed carcinoma *in situ.* No further treatment was given, and the patient was well on a recent follow-up after 24 months.

From 1941 to 1959, there were several radiotherapists at the Ellis Fischel State Cancer Hospital, and this circumstance accounts for some variation in the mode of ionizing radiation administered. In general, all the postpartum cases were given either a combination of transvaginal and external roentgen therapy, or radium and external roentgen therapy, or telecobalt and transvaginal therapy. The histories of the five patients who were pregnant at the time of admission will be summarized briefly. Even though they received adequate and acceptable treatment, only one was alive and well at six-months follow-up.

CASE REPORTS

Case No. 1, K. H. (53-18,145), was a 27-year-old gravida 5, para 3, aborta 1, at 16 weeks' gestation. She had a Stage I lesion. External roentgen therapy started August 4, 1953, and a hysterectomy was performed August 6, 1953. The fetus was macerated. Radium and external roentgen therapy were continued for completion of the calculated dosage. The patient was relatively well, thereafter, until her second admission on May 27, 1957, when a psoas abscess was incised and drained, and a recurrence was found in the left pelvis involving the ileum. Enterostomy and transverse colostomy were performed. The patient died on October 24, 1957.

Case No. 2, M. S. (56-22,866), was a 35-year-old gravida 7, para 6, at 16 weeks' gestation. She had a Stage I lesion. Radium was administered by colpostat on October 2, 1956, and a hysterotomy was performed on October 11, 1956. Radium tandem and external roentgen therapy were then completed. The tumor responded poorly to treatment, and was thought to be radioresistant. A cervical biopsy confirmed the persistent tumor. Total hysterectomy and bilateral salpingo-oophorectomy were done April 18, 1957. On June 27, 1957, a pelvic exenteration was done because of local recurrence. The patient died on July 2, 1958, with liver metastases.

Case No. 3, F. G. (46-8,385), was a 36-year-old gravida 8, para 6, aborta 1, at 10 weeks' gestation. She had a Stage II lesion. External and transvaginal roentgen therapy were started March 3, 1946. After the third day, the patient aborted a small fetus, and the remainder of therapy was completed. She died of persistent cancer, June 26, 1947.

Case No. 4, A. A. (52-17,288), was a 35-year-old gravida 3, para 2, at 20 weeks' gestation. She had a Stage III lesion. Hysterotomy was done on December 5, 1952. External radiotherapy and radium therapy followed. At one year follow-up, the patient had a pelvic mass and tumor persistence in the vagina. She died on February 22, 1954, of persistent carcinoma of the cervix.

Case No. 5, (59-27,005), was a 35-year-old gravida 5, para 3, aborta 1, at 16 weeks' gestation. She had a Stage II lesion. Radium was administered by colpostat August 28, 1959. Telecobalt to external ports was started September 8, 1959. Pitocin induction was successful on the second day, and the fetus and placenta aborted on October 21, 1959. At the same time, a second colpostat was placed in the vagina. The patient was well when she made a clinic visit on May 20, 1960.

Table 1 is a summary of the 19 patients who were postpartum when they received their initial therapy. Unless otherwise specified, the fatalities resulted from persistent disease, either clinically suspected or proved by biopsy. It is of interest that Case No. 17 was found to have metastases to the myocardium at necropsy. She was observed to have pericardial and pleural effusion before death.

We think it is quite significant that there were instances of patient or physician delay in 8 out of 19 cases in the postpartum group. Case No. 1 was bleeding at the time of her postpartum visit, and the diagnosis was delayed another two months. Case No. 8 had a cesarean section with "bleeding" as the indication, and the diagnosis of cancer was made postpartum. Case No. 14 was seen by her physician four times on prenatal visits before a pelvic examination was done and a fungating mass was discovered. She then had a cesarean section performed at eight months' gestation by a second physician because of "suspected placenta previa." Case No. 16, her physician noted, had a suspicious lesion at delivery, but no biopsy was done until eight months later. Case No. 19 also had a cesarean section because of vaginal bleeding. Case No. 9 had no pelvic examination during her pregnancy. Case No. 11 received "shots for bleeding" four months before the diagnosis was made. Case No. 10 was an instance of patient delay, for she did not return to the hospital for eight months after a pelvic exenteration had been suggested to her.

Of our 24 cases of invasive cancer, only 12 have been followed for five years or longer. Four of those 12 (33.3 per cent) were alive at the end of five years, and these were all postpartum. This group includes Case No. 6 (Table 1), who died 5½ years following treatment and whose cause of death was pneumonia. There are five patients out of the whole series of 24 who are alive at the time this report is written and who are without disease, but one has been followed only for six months after treatment.

TABLE 1

POSTPARTUM CERVICAL CANCERS RECEIVING PRIMARY TREATMENT AT ELLIS FISCHEL STATE CANCER HOSPITAL 1941-1959

	Patient	*Stage*	*Duration of Symptoms*	*Time Postpartum Treatment Given*	*Treatment (In Sequence)*	*Result*	*Remarks*
1.	M. D.	I	2 months	4 months	X-ray, Radium	Well, 3 years	Delivered vaginally. No postpartum pelvic examination because of bleeding postpartum.
2.	G. F.	I	6 months	1 month	Transvaginal	Well, 12 years	No residual cancer here after outside biopsy.
3.	I. L.	I	No symptoms	4 months	Radium, X-ray	Well, 2 years	———
4.	M. N.	II	6 months	6 months	Telecobalt, Transvaginal	Died, 15 months	Delivered vaginally.
5.	E. J.	II	1 month	1 month	Telecobalt, Transvaginal	Died, 9 months	Early abortion.
6.	B. L.	II	30 months	3 months	X-ray, Transvaginal	Died, 5½ years. Cause: Pneumonia	Delivered vaginally.
7.	A. F.	III	5 months	5 months	X-ray, Radium August, 1957	Died, 19 months of generalized metastases	Pelvic exenteration, January, 1958, for persistent tumor.
8.	E. F.	III	6 months	4 months	X-ray, Radium	Well, 5 years	C. section 4 months prior to treatment. Indication "bleeding."
9.	D. T.	III	4 months	8 months	X-ray, Radium, Transvaginal	Died, 13 months	No pelvic examination during pregnancy.
10.	E. W.	III	No symptoms	4 months	Radium, Telecobalt	Died, 18 months	Exenteration candidate. Patient let 8 months elapse between radiation and return for surgery.
11.	M. S.	III	5 months	5 months	X-ray, Radium	Well, 5 years	Received shots 4 months before diagnosis was made.
12.	L. H.	III	11 months	6 months	Telecobalt, Radium	Died, 7 months	Delivered vaginally. Symptoms noted at 4 months' gestation.
13.	W. B.	III	2 months	3 months	X-ray, Radium	Died, 16 months	Delivered vaginally.
14.	R. W.	IV	8 months	6 months	X-ray, Radium, Transvaginal	Died, 7 months	C. section April, 1952, for "bleeding." No pelvic examination until 5 months' gestation.
15.	D. M.	IV	6 months	1 month	X-ray, Transvaginal	Died, 12 months	Delivered vaginally September, 1948.
16.	G. M.	IV	9 months	9 months	X-ray, Transvaginal	Died, 5 months	Suspicious lesion noted at delivery July of 1952, but no biopsy done until February, 1953.
17.	R. J.	IV	5 months	5 months	X-ray, Transvaginal	Died, 23 months. Metastases to *myocardium* and liver	Delivered vaginally.
18.	W. R.	IV	24 months	6 months	X-ray, Transvaginal	Died, 5 months	Premature delivery at 5 months' gestation.
19.	S. C.	IV	12 months	2 months	X-ray	Died, 1 month	C. section 3 months prior to admission. Indication: bleeding.

Our results therefore compare favorably with those of Maino and Mussey,[8] and those of Sadugor,[2] but not with those of the other authors previously cited.

THE TIMING OF RADIATION

Adequate treatment of cervical cancer and pregnancy must be individualized. Radiation is recommended as the primary treatment without regard to the fetus, up until a period of viability has been reached, usually during the twenty-eighth week. In the first trimester, abortion usually occurs in the first few weeks after the start of therapy. Heyman[10] has shown that induced abortion or hysterotomy prior to radiation resulted in an 11 per cent five-year survival, as contrasted with a 57 per cent five-year survival when radiation was used first. If the fetus is not aborted at the end of three or four weeks of radiation, a hysterotomy may then be required. This is more probable after the twelfth week, for as the fetus grows it becomes less susceptible to death from radiation. After emptying the uterus, one may then give the remainder of the planned radiation.

In the period of viability, radium may be used first if more time is needed to insure fetal survival. Corscaden states: "By the law of inverse square, there will be a maximum effect of the radium for a depth of 1.5 cm., and beyond this a rapidly diminishing dose of gamma roentgens. . . . Therefore, it is possible to administer 3,000 mg. hours of radium in three capsules about the cervix without causing any more damage than a temporary alopecia of the child's head."[11]

Hayden[3] reported five cases of late pregnancy in which he used radium followed by cesarean section in from two to six weeks. Only one child showed alopecia, with two bald spots on the head. At six months, the child's development was normal. The other four children also developed normally.

After cesarean section, the remainder of the radiation may then be given. We do not agree with Brown and Jernigan,[4] or with Hayden,[3] about performing a Porro section. Such an attack is against the principles of surgery in the treatment of cancer, in that it crosses lines of lymphatic invasion. Any surgery should be radical and outside the limits of tumor involvement.

COMMENT

The literature on cervical cancer in pregnancy has always emphasized the pitfalls involved in diagnosis, and we can do no better than to reemphasize the program outlined by Montgomery[12] for cancer diagnosis in pregnancy. As with most cancer detection, the majority of cases should be discovered by the general practitioner, since he handles the majority of obstetrical patients. If a pelvic examination had been done on each patient at the time of her first prenatal visit, several of our cases might have been recognized sooner.

Bleeding during pregnancy in the first and second trimester is an *indication* for a careful speculum examination to determine the etiology of the bleeding.

The presence of a suspicious lesion calls for a biopsy, and the report of suspicious cytology demands a four-quadrant biopsy or a conization of the cervix for a histological diagnosis. There is no evidence to show that such diagnostic procedures endanger a pregnancy. The administration of medications or the performance of a cesarean section without the making of a diagnosis is deplorable.

Corscaden[11] has admirably pointed out that by maximum use of the ordinary diagnostic technics at our disposal, we can vastly improve the survival rate in cervical cancer cases. We therefore do not need a new scientific discovery in this area, but only the knowledge of present-day methods.

Once the diagnosis has been made or suspected, the patient should be referred to a facility where consultation with a radiotherapist, a surgeon and an obstetrician can be secured. Frequently, the best treatment for the patient requires the skills of all three. Premature treatment with surgery or radiation by one not experienced in dealing with such problems may result in disaster to both the fetus and the mother.

The results of our own cases have been disappointing. The fact that 19 out of 24 cases were postpartum may account for the low survival rate in our series, since it is generally agreed that delivery through a cancerous cervix worsens the prognosis. This is true not only from the standpoint of bleeding, infection or dystocia, but also because of a possibility of a more rapid dissemination of tumor cells away from the cervix.

Another reason for our poor results may lie in the fact that there is no obstetrical service at the Ellis Fischel Hospital. Therefore, our own efforts at early detection during pregnancy could not be instituted. Since the main factor in achieving better results lies in early diagnosis, we are dependent on the referring physician to improve our cure rate in the future. We are hopeful that this report may stimulate the general practitioner to early cancer detection and diagnosis.

SUMMARY

1. Thirty-nine cases of cervical cancer associated with pregnancy have been seen at the Ellis Fischel State Cancer Hospital in the years 1941 to 1959. Of these, 24 cases of invasive cancer have received initial treatment there. Four of 12 cases, or 33 per cent, are five-year survivors.

2. Radiation therapy is the treatment of choice, as in the non-pregnant state.

3. A more complete use of existing diagnostic tools and technics will undoubtedly improve the existing survival rate.

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Experimental Psychoses

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THE PAST DECADE has witnessed a remarkable upsurge of interest in agents which bring about symptoms of psychosis and in agents which get rid of them. This paper will deal with the former, its aim being to review the topic of experimental psychoses from the perspective of current psychiatric thought.

There are two major groupings of naturally-occurring psychoses. Those of the first group result from a primary impairment of brain function, and are known as "brain syndromes" or "organic reaction types." The second group, the so-called "functional" psychoses, are disorders characterized by varying degrees of personality disintegration, and failure to make correct measurements of external reality in various spheres. In addition, individuals with "functional" psychoses fail in their attempts to relate themselves effectively to other people or to their own work. One can usually distinguish between the "organic" psychoses and those of unknown cause on the basis of the presenting symptomatology. The "organic" psychoses are characterized by (1) impairment of orientation, (2) impairment of memory and other intellectual functions, (3) impairment of judgment and (4) lability and shallowness of affect. These symptoms are rarely found in the "functional" group. Such clinical distinctions develop some significance when one attempts to relate the action of an experimental agent to the phenomena of natural disease.

All physicians know that a large variety of agents may produce acute and chronic psychoses if they are taken in too great a quantity or for too long a period of time, or if they are poisonous in small quantities and if the subject is especially susceptible to them. Table 1 contains a brief listing

TABLE 1

AGENTS PRODUCING ACUTE AND CHRONIC PSYCHOSES OF THE "ORGANIC REACTION" TYPE[1]

1. Central nervous system depressants (barbiturates, bromides)
2. Central nervous system stimulants (amphetamine, caffeine)
3. Analgesics (acetanilid, acetylsalicylic acid)
4. Autonomic nervous system activators and blockers (atropine, scopolamine)
5. Local anesthetics (cocaine)
6. Antimalarials (quinine)
7. Oxytocics (ergot alkaloids)
8. Heavy metals (Pb, As, Hg)
9. Hormones (thyroid)
10. Gases (low and high O_2; CO)

of some of the agents that are capable of producing acute and chronic psychoses of the "organic reaction" type.[1] The production of a psychosis by these agents is not an uncommon occurrence. For example, until recently many psychiatric hospitals did routine blood bromide determinations on every patient admitted. These agents, however, are not the ones of interest in a study of experimental psychoses. One reason is that the symptoms they produce involve alterations of intellectual function, memory and orientation, and these are not characteristic of the "functional" psychoses. The latter include mainly the psychotic depressions, the schizophrenias and the paranoid reactions. In these psychoses, the sensorium and the intellectual functions remain relatively intact. Another reason why the agents in Table 1 are not ordinarily regarded as capable of producing experimental psychoses depends on the time course

Dr. Shagass, a professor of psychiatry, made this presentation at the March 2, 1960, meeting of the Johnson County Medical Society, in Iowa City.

and the dosage in which they must act. They usually require fairly heavy dosages over a relatively long period of time to produce psychotic reactions.

TABLE 2

AGENTS SOMETIMES PRODUCING CONDITIONS LIKE "FUNCTIONAL" PSYCHOSES IN MAN

1. ACTH, cortisone
2. Reserpine
3. Nalorphine
4. Prolonged sleep deprivation
5. Restriction of sensory input

ACTH AND CORTISONE

Table 2 lists some agents which frequently, but not invariably, produce conditions resembling "functional" psychoses in man. The first ones are ACTH and cortisone. Following the discovery of their therapeutic effects, and after their administration to large numbers of patients, considerable interest arose over the mental symptoms associated with the administration of these drugs. The general conclusion reached on the basis of many studies is that between 5 and 15 per cent of cases may develop serious psychiatric disturbances. Some believe that whether or not these difficulties occur depends upon the patient's predisposition, but this theory has not been established. The reactions often take the form of affective disturbance with depressive, manic or paranoid features. They frequently are associated with organic mental signs. The toxic states tend to disappear spontaneously, but the others have required specific treatment such as electroconvulsive therapy (E.C.T.).[2]

RESERPINE

Another agent which has been implicated in the eliciting of functional psychoses is reserpine.[3, 4] Most psychiatrists have seen a fair number of patients who presented with classical psychotic depressive syndromes that appeared to be due to reserpine, usually administered for the treatment of hypertension, but occasionally for its sedative properties. Although the depressions may sometimes subside spontaneously after the reserpine has been stopped, such is frequently not the case, and the patient has to be treated as a true depressive psychosis by means of either E.C.T. or a potent antidepressant drug. In depressions produced by reserpine, as in those caused by either ACTH or cortisone, it is often contended that the psychotic reaction pattern has occurred in a predisposed individual. This contention is difficult to prove, and we certainly have seen patients with reserpine depressions in whom the history gave no evidence of predisposing factors.

NALORPHINE

The third agent listed is nalorphine,[5, 6] a powerful morphine antagonist which may occasionally produce mood disturbances, disturbing daydreams, or actual visual hallucinations, and which in large doses can cause extreme anxiety, distortion of the body image, and hallucinations of movement when the eyes are closed. These symptoms are not associated with loss of contact or disorientation. The following is one patient's subjective report: "There is pleasant warmth, peace and contentment. Hard to focus eyes to read. It is easier not to read. My nose itches, but I don't have energy enough to scratch it. Feel as if I am in a fairyland with doll-size houses. I am not talking rationally. Why don't I shut up? I have no desire to stop talking. Feel as if I am ready to float. Maybe I ought to pay you for this experiment. It is very pleasant —getting halfway between complete loss of emotional control and knowing I am making a fool of myself and not caring. Feel gay—high as a kite. I am halfway between daydreams and sleep."

PROLONGED SLEEP DEPRIVATION

The last two agents listed are not drugs. Prolonged sleep deprivation, in partial form, is commonly encountered in clinical practice. Probably the most extensive study of its effects was carried out by David B. Tyler on army personnel who were kept awake for 112 hours.[7] In 1955, he reported the results of eight experiments with 350 subjects. He found that after about 40 hours of sleep deprivation, all subjects experienced reactions which could be considered psychotic-like. Over 70 per cent complained of auditory or visual aberrations which occurred periodically and which were not true hallucinations because the men were aware that they were hearing or seeing things that did not exist.

It is perhaps of interest that the most common experience in this group of army men concerned females. The subjects reported seeing a girl or a female relative, and sometimes said their fellow subjects in the experiments seemed to them to resemble girls. However, this apparent demonstration that sleeplessness eliminates the barrier against revealing underlying sexual desires does not seem to hold in a consistent way, for the next most common hallucinations involved animals. The subjects heard dogs barking, roosters crowing or other animals making their characteristic sounds, and saw animals.

Disturbances in thinking were common to all subjects after the second sleepless night, but were difficult to detect in formal testing. When the men were given tests, they were well oriented and had no difficulty in retention or calculation. They could recite digits forwards and backwards just as well after having been kept awake for a long period of time as they had before. The Rorschach

test also showed no significant changes after 100 hours of wakefulness. However, outside the test situation and during the spontaneous conversations of the subjects, at meals, on marches or during rest periods, they displayed rambling, garrulous speech which lacked coherent structure or logical connections. Frequently there was difficulty in answering simple questions regarding common experiences. For example, one man, when asked at mess on the fourth day, "What is the name of the captain of your company?" answered after a moment, "He is married."

A third symptom was unreasonable, unrelated or silly laughter. There were also some changes in emotional response, with euphoria followed by mild depression, a slowing down of mental activity and an apparent indifference to unusual behavior in others.

Tyler emphasizes that in most subjects the symptoms are mild. He had a few subjects in whom the symptoms were severe, however, resembling acute schizophrenia of the paranoid type. These disappeared after a long sleep. Schizophrenic-like reactions are exemplified in the following case:

After about 46 hours of sleeplessness, the subject started walking off the line of march. He was brought into line and shortly started talking to himself. He became extremely aggressive and started an unprovoked fight with the man marching in front of him. He insisted that he was in the corps carrying out a secret mission for the President. He also claimed that he was a secret agent for ferreting out spies and traitors. He finally broke ranks, ran across a field, stumbled into a ditch and had to be taken forcibly to the dispensary and put to bed. He slept thereafter for about 18 hours, and on awakening had no recollection of the events of the previous night. There was nothing in his former history to indicate abnormal behavior.

Tyler was of the opinion that the rapid disappearance of the symptoms after sleep indicated that the state resembled a toxic type of psychosis, particularly those reactions coincident with certain illnesses or overdosages of drugs.

RESTRICTION OF SENSORY INPUT

The last agent listed in Table 2 is restriction of sensory input. Following the initial studies in Hebb's department at McGill,[8] there has been a great deal of interest in the effects of sensory deprivation. This interest has arisen not only because of the possible relationship of the observations to an understanding of psychotic processes but also because of the possible applications of those findings to space medicine. The McGill experimenters recruited male college students and paid them $20 for a 24-hour day—at that time a very good rate. The subjects were to spend their day wearing translucent goggles which transmitted diffuse light but prevented pattern vision, and except when eating or at the toilet, they wore gloves and cardboard cuffs, the latter extending from below the elbow to beyond the fingertips. These permitted free joint-movement, but limited tactual perception. Auditory stimulation was limited by a partially soundproof cubicle and a U-shaped foam rubber pillow on which the subject kept his head.

The experimenters were surprised to find that it was difficult to keep subjects for more than two or three days. They became very restless, displaying constant random movements, and they described this restlessness as unpleasant. They would sing, whistle, talk to themselves, tap their cuffs together or explore the cubicle with them. This boredom seemed to be partially due to the deterioration in their capacity to think systematically and productively. On various psychometric tests administered to the experimental subjects and to a group of controls not kept in sensory deprivation, the experimental subjects showed much poorer performance. Most relevant for our purpose were the hallucinations reported by the subjects while in the experimental apparatus. These reports at first puzzled the observers, who were not psychiatrically sophisticated. Several early subjects referred to "having a dream while awake." Then, one of the investigators experienced the phenomenon himself while serving as a subject, and realized its peculiarity and extent.

There were several levels of complexity of the hallucinations. In the simplest form, the visual field, when the subject's eyes were closed, changed from dark to light color. Next in complexity were dots of light, lines or simple geometrical patterns; these were reported by all subjects. Still more complex forms consisted of wallpaper patterns and isolated figures or objects without background, e.g., a row of little yellow men with black caps on their heads and with their mouths open. Finally, there were integrated scenes, e.g., a progression of squirrels with sacks over their shoulders marching purposefully across a snow field. One curious fact was that the hallucinations were reported as being inverted or tilted at an angle. At first, the subjects were surprised at these phenomena, then amused or interested, but then, in some instances, irritated. They complained that the vividness of the hallucinations interfered with their sleep.

In addition to the visual hallucinations, some subjects could hear people speaking or music playing. Some also reported kinesthetic and somesthetic phenomena. In addition, there were reports resembling depersonalization, with bodily strangeness, e.g., "My mind seems to be a ball of cotton wool floating above my body."

This report by Bexton, Heron and Scott was published in 1954, and there has been a great deal of work done on the effects of sensory deprivation

since then. There have been other technics developed for inducing the isolation phenomena, one of the best-known being that of John Lilly[9] which involved immersion in a tank of water at approximately body temperature without clothes and with a mask over the eyes. Under such conditions, the mental changes occur much more rapidly, taking less than three hours to appear. These experiments indicate the tremendous importance for normal functioning of sensory input within relatively well-defined limits. For those unaware of these observations, it may come as a rather striking bit of information that man is such a relatively open system and so dependent upon the effects of energies emanating from his environment.

TABLE 3

PSYCHOTOMIMETIC AGENTS

1. LSD-25 (lysergic acid diethylamide)
2. LAE-32 (lysergic acid ethylamide)
3. Mescaline (peyote)
4. Sernyl (1-(1-phenylcyclohexyl) piperidine monohydrochloride)
5. Adrenochrome, adrenoxin
6. Taraxein

LYSERGIC ACID DIETHYLAMIDE

Let us now turn to those agents which have caused most of the interest in experimental psychoses. Table 3 shows a few of them. There are many more. The one which has stimulated the greatest amount of work is LSD-25, or lysergic acid diethylamide. These drugs have been called hallucinogens or psychotomimetic agents. Workers are not agreed as to the best name for them. As Beecher[10] has pointed out, modern interest in such drugs goes back more than 100 years, and active experimentation with them is more than 75 years old. However, the past decade has probably contained more experimental work with psychosis-inducing agents than all previous periods put together. A number of historical trends have influenced this situation. One has been the development of the ataractic or tranquilizer agents which produced a favorable climate for biochemical theories on the etiology of the functional psychiatric disorders. Accompanying this has been a greater interest on the part of the major drug houses and the government in sponsoring psychiatric research with a chemical slant. LSD-25 itself also inspired hope for discovering a biochemical etiology of schizophrenia, since minute amounts of it can induce psychotic-like symptoms. (The average dose is 50 millionths of a gram.)

LSD-25, like LAE-32, is an ergot alkaloid. Its profound psychic effects were discovered accidentally in 1943 by Dr. A. Hofmann, of Sandoz Co., in Switzerland. Stoll[11] quotes as follows from Hofmann's report of April 22, 1943:

"On April 16, in the midst of my afternoon work in the laboratory, I had to give up working. I had to go home because I experienced a very peculiar restlessness which was associated with a slight attack of dizziness. At home I went to bed and got into a not unpleasant state of drunkenness which was characterized by an extremely stimulating fantasy. When I closed my eyes (the daylight was most unpleasant to me) I experienced fantastic images of an extraordinary plasticity. They were associated with an intense kaleidoscopic play of colors. After about two hours this condition disappeared."

Hofmann was unable to explain these symptoms, but correctly related them to his work with LSD which he had just succeeded in isolating. To make sure of his self-observation, he took 250 gamma the next day, considering this to be the smallest amount of the ergot alkaloids of the ergotamine-ergobasine group which might be expected to give effects. However, he experienced even more extraordinary symptoms than before. Stoll investigated Hofmann's discovery further, and found that the most striking effects were disturbances in perception, with visual hallucinations. There were also vegetative and motor symptoms, variations in feeling tone, acceleration of the train of thought and slight dimming of consciousness, but maintenance of judgment. He regarded the picture as an acute exogenous reaction type.

The early workers with LSD felt that they were producing a toxic psychosis, and by definition they were. However, there are several distinctions between the groups of agents listed in Tables 1 and 3. The dosages of the agents in Table 3 are generally much smaller. Furthermore, disturbances in feeling and in perception, with maintenance of relatively adequate sensorium, predominate, as compared with the disturbances in intellect and memory produced by the Table 1 agents. There is also the marked difference in the time base of action of the agent. The psychotomimetic agents differ from those listed in Table 2 in that they are much more certain in their action, and apparently will affect all subjects when given in adequate doses.

By now, thousands of people have been given LSD for one reason or another. In addition to the experimental use of the drug, the vivid imagery induced by it has been utilized as a psychotherapeutic procedure, and beneficial results have been claimed.[12] It is a rather curious fact that normal volunteers generally show more vivid symptoms than do the seriously ill psychiatric patients who are given the drug. Part of the explanation is unquestionably to be found in the influence of suggestion. There is, however, a fairly consistent pattern of response. Stoll's description can be cited. Visual hallucinations, ranging from elementary

sensations and geometric patterns of varying designs and colors, to distorted and grotesque objects such as peacock feathers, Buddhas and so on were quite common. Colors appeared to depend upon the subject's mood. When he was euphoric they were bright red, yellow and green, and when he was depressed blue and dark colors predominated. Illusions were common; for example, a ditch was seen as a hill, and spots on a table were seen as living salamanders and butterflies. Perspective was distorted; corridors appeared unusually long and plump, or distant and small. True auditory hallucinations were rarely observed, but hyperacusis was frequently noted. Disturbances of taste were observed, and disturbances in tactile and deep sensibility were indicated by reports of furry feelings in the mouth and soapy feelings of the skin of the face. Stoll's descriptions also included reports of alterations in time sense and a compulsion to express what would ordinarily be suppressed. There were also a few reports of depersonalization, the subjects stating, "I feel as if I were not myself." Nevertheless, consciousness was never seriously impaired, and orientation for place was preserved. Thought occasionally appeared to be fragmented, but more often a flight of ideas was observed with, in about half of the cases, a sort of perseverance indicated by repeated returns to a particular topic and a preoccupation with inconsequential detail.

As regards emotion, the most common mood change involves euphoria, with a good deal of laughter which may at times seem to be compulsive.[13–15] However, some individuals may manifest depression, with loud weeping, resentment and aggressiveness, or passively with negativism and apathy. Occasionally some individuals have reported ideas of suicide. In some cases, also, there appear to be alternating phases of euphoria and depression. Alterations of the body percept are relatively common and, in the more distinct reactions, subjects may have the impression of having enormous heads, limbs lengthened or separated from their bodies, noses out of place, or whole bodies lighter or much heavier than usual. It is particularly impressive that such personality tests as the Rorschach, which frequently remain unchanged when, for example, a schizophrenic seems to have been markedly benefited by therapy, do show fairly marked changes under the influence of LSD. Those workers who have administered Rorschach tests to LSD subjects claim that the changes resemble those found in schizophrenia.[15, 16]

After an effective dose of LSD has been taken, the first changes usually set in within a half to one hour, and the maximum is reached after about two hours. The total effect lasts from three to six hours. After-effects may sometimes be observed for a day, and for over a week in very exceptional cases. There are a variety of symptoms which may be called vegetative. These include vertigo, occasional headaches, weakness, fatigue, a feeling of internal vibration, and occasionally general discomfort. The blood pressure generally does not change very much, and may go either up or down. The pulse more frequently accelerates, but occasionally slows. The subject may report palpitations or unpleasant precordial sensations. There is occasionally transistory nausea, and less frequently emesis. Respiration is generally unchanged, and the composition of the urine is also rarely altered. The temperature generally remains the same, although there may be feelings of heat or cold, and occasionally chills. Salivation is often increased, and so are sweating and lacrimation. In general, the pupils dilate. There appears to be a small average increase in blood sugar amounting to about 6 per cent after intravenous administration of LSD. This may be associated with the changes produced in catecholamines, as shown by Liddell and Weil-Malherbe.[17] They found a multiphasic effect of LSD on catecholamines. There is an initial rise, followed by a fall after 30 minutes, and then a second rise. In the motor sphere, LSD produces a certain amount of ataxia, with a lack of precision of intentional movements and occasionally some faulty articulation of speech. Tendon reflexes are occasionally accentuated, and very large doses have been observed in some cases to produce catatonic states, with stiff neck and perseverant posture of the body.

LYSERGIC ACID ETHYLAMIDE

LAE-32 or lysergic acid ethylamide[18] has to be given in about 10 times the dose of LSD in order to produce the same psychological effects. In small doses, however, it produces the same physiological effects as LSD. In doses about five times as great as those of LSD, there isn't very much disturbance in visual perception, but there is a considerable disturbance in energy, together with feelings of changed personality, difficulties of contact with surroundings and a slight drowsiness. Solms reported that in doses of 500 gamma, LAE produced disturbances in visual perception in only one-third of the subjects, whereas other workers recorded such disturbances in from 56 to 78 per cent of subjects with LSD in doses of from 25 to 100 gamma. Solms emphasized the differential selectivity between LAE and LSD as regards eliciting visual phenomena.

MESCALINE

Mescaline is one of the older and better-known psychotomimetic agents and will be mentioned only briefly here. One description of its effects follows: "The mental changes produced are of an almost exactly similar nature to those found in psychotic patients—namely hallucinations of all senses, delusions, transformations of personality, thought disorders, abnormalities of conduct, af-

fect changes, and disorders of temporal and spatial perception."[19] The visual experiences are predominant in mescaline intoxication, especially as regards their brilliance of color and intricacy of pattern, the persistence of after-images and the remarkable facility for visual change. Shapes of real objects alter in fascinating ways, and parts of bodies disappear. Wikler's book contains a detailed description of the effects of mescaline.[20]

SERNYL

The fourth agent listed is Sernyl.[21] It was recently introduced as an anesthetic agent. Intravenous administration by continuous drip, in doses of 0.25 mg. Kg. rapidly produced a profound loss of pain sensation which permitted the performance of minor and even major surgical procedures without recourse to other standard anesthetic agents. The patient appeared not to be unconscious, but rather in a state similar to what is referred to in the neurological literature as akinetic mutism. He lay with his eyes open, immobile, at times looking at the examiner but not responding to questions or painful stimuli. When his arm was passively moved, it might retain the given posture in a catatonic fashion. Yet, although surgery could be done without discomfort, the usefulness of the drug was limited by the acute psychotic reactions which frequently ensued and which lasted up to about 18 hours. Investigated as a psychotomimetic agent by Luby and his coworkers at the Lafayette Clinic, in Detroit, Sernyl was found to produce severe depersonalization, feelings of unreality, a thinking defect characterized by concreteness and loosening of associations, hypnagogic states, repetitive motor phenomena and feelings of inebriation. The workers felt that it seemed to reproduce the primary symptoms of the schizophrenic process.

The last two agents listed as psychotomimetics exemplify the possible theoretical significance of the work on experimental psychoses. From the start, some investigators have felt that LSD's ability, in minute amounts, to produce symptoms resembling those of psychoses indicated the possibility of an endogenously-produced substance important in the etiology of schizophrenia. The first and most obvious objection to this notion arises from the fact that there is no real agreement that the psychotomimetic effects of LSD reproduce those found in naturally-occurring schizophrenia. Some workers have said that they resemble toxic psychoses; others have claimed that they resemble schizophrenia very closely. It seems quite clear that one can make out an argument for either view, but this really amounts to saying that both similarities and differences are present. Furthermore, since no one has ever claimed to find LSD occurring naturally in the schizophrenic patient, LSD itself is not implicated in the etiology of schizophrenia.

ADRENALIN AND ADRENOCHROME

However, Osmond and Smythies, together with Hoffer,[22] working in Saskatchewan some years ago, noted that mescaline and adrenalin have similar biochemical structures. It was suggested that one of the etiological agents in schizophrenia might be a substance or substances lying between those two—one that has the psychological properties of mescaline but is effective in concentrations near those of adrenalin. The hypothesized substances were called, collectively, M substance. There then ensued a search—and it is still going on—for M substance, and an attempt to detect it in the bodies of schizophrenics.

These workers noted that a group of compounds with hallucinogenic properties—namely mescaline, LSD, harmine, ibogaine and hashish—have an indole nucleus or its precursor in common. They then accidentally happened to encounter an individual who had experienced mental changes since childhood which were attributed to his taking adrenalin for asthma. Following this lead, they discovered that there is a substance known as pink adrenalin, which is called adrenochrome, which has an indole nucleus in common with the hallucinogens and which can be readily derived from adrenalin. Hoffer and his co-workers studied the pharmacological and psychological effects of adrenochrome. In 1954, they reported a rather dramatic experiment carried out on Humphrey Osmond. He took 5 mg. of adrenochrome, and a partial description of his experience follows:[22]

"In the outside world everything seemed sharper and the Van Gogh was three-dimensional. I began to feel that I was losing touch with everything. As we drove back, a pedestrian walked across the road in front of us. I thought we might run him down, and watched with detached curiosity. I had no concern for the victim. I began to wonder whether I was a person any more, and to think that I might be a plant or a stone. I felt indifferent toward humans and had to curb myself from making unpleasant personal remarks about them. I had no inclination to say more or less than I observed."

The next day, Osmond noticed that he fluctuated between feeling his usual self and having, as he put it, "the glass wall, other-side-of-the-barrier feeling" which was apparently elicited by stress. When he drove home on the second day, he had coffee at a wayside stop and became disturbed by the covert glances of a sinister-looking man. It was not until 60 hours after taking the adrenochrome that he again and permanently felt his usual self.

Rinkel *et al.*[23, 24] could not reproduce the effects observed by Hoffer's group with adrenochrome. They suggested that the active product might be adrenoxine, since the material used by Hoffer's group was possibly deteriorating. There has been a great deal of work based on the possibility that

schizophrenia is due to the endogenous production of a toxic substance. A variety of indirect evidence supports this claim. For example, schizophrenic body fluids contain one or more substances that are toxic to tadpoles[25] and cell cultures.[26] Although there is currently a great deal of work going on in the study of catecholamine metabolism, and the Saskatchewan group under Hoffer still is attempting to verify the adrenochrome hypothesis, no solidly accepted findings have yet emerged. Recently, Hoffer and Payza have claimed to demonstrate the presence of adrenochrome in the blood of schizophrenics, but this claim has been challenged by other chemists on the grounds that their method was not specific.[27, 28]

TARAXEIN

Taraxein signifies another development in the attempt to determine the etiology of schizophrenia along biochemical lines. Heath and his group,[29] in New Orleans, extracted from the plasma of schizophrenics a precipitate which didn't seem to be present in normal serum. When this was injected into monkeys, they seemed dazed and out of contact. Their behavior seemed catatonic, and they showed waxy flexibility. In addition, there were clearcut alterations in electrical recordings from leads in their septal areas. These electrical changes seemed to resemble those which Heath had previously obtained in schizophrenic patients with electrodes implanted in the septal areas. They then proceeded to extract taraxein from schizophrenic serum pooled from several patients. Activity was judged in terms of behavioral and electroencephalographic effects on monkeys. The serum was then injected into human volunteers obtained from a prison population. It was claimed that all subjects receiving taraxein developed symptoms which have been described for schizophrenia. Control serum from nonschizophrenic subjects did not produce such changes. The reaction is described as resembling those of various schizophrenic subtypes and was not correlated with the sub-type of schizophrenia from which the serum was drawn. The work of Heath has not yet been adequately confirmed.

CONCLUSION

A final word about the psychiatric relevance of these studies of experimental psychoses. First of all, there can be little doubt that the study of psychotomimetic agents has stimulated a great deal of fundamental biochemical and neurophysiological work, and should it turn out that a metabolic etiology is involved in schizophrenia, these drugs can take much of the credit for stimulating work toward its discovery. However, the most likely contribution that can be expected of these studies of experimental psychoses will be toward improving our understanding of the pathogenesis of psychotic reactions.

Whatever the ultimate etiology may be, it seems fairly certain that the psychopathological phenomena that the clinician sees in the psychoses must be mediated by neurophysiological and biochemical mechanisms which are involved in normal behavior and which are, in some way, functionally altered during illness. It then becomes possible to use the psychotomimetic agents to bring about experimentally some of the presenting phenomena of the psychoses and thereby to study the kinds of mechanisms which must be altered in so doing. There has been a considerable amount of work done along these lines, and there will be a great deal more. We do not know whether these studies will answer our questions about ultimate etiology, but they should teach us a great deal about the neurophysiology and biochemistry of behavior.

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State University of Iowa College of Medicine

Clinical Pathologic Conference

SUMMARY OF CLINICAL FINDINGS

A 53-YEAR-OLD WHITE WOMAN was admitted to University Hospitals in a semicomatose condition approximately one month after having been discharged to her home from a nearby clinic. She had entered the clinic on September 7, 1958, with a history of having had to stop work two weeks earlier because of depression and progressive loss of memory throughout the previous six months. At the same time, she had complained of severe headaches associated with nausea and vomiting.

The neurological examination at the clinic had been negative "except for some nystagmus." An electroencephalogram had revealed generalized delta grade 2 activity. A ventriculogram on September 12, 1958, had revealed dilatation of the entire ventricular system, without any evidence of obstruction.

The posterior fossa was explored, but nothing significant was found. Continuous lumbar subarachnoid drainage had then been instituted. The patient responded well to this treatment, but when it was discontinued, she again became drowsy. A ventriculomastoid shunt had then been performed, with subsequent improvement. On the thirtieth hospital day, the patient had been discharged.

For the next three weeks, the patient had been in fairly good condition at home, complaining only of slowness of speech and thought, decreased ability to hear and equivocally diminished vision. The day before her admission to S.U.I. Hospitals, she had complained of headache and stiff neck, had begun to vomit, had become unable to walk, had progressed into coma and had developed focal seizures in the left arm.

The patient entered University Hospitals on November 17, 1958, semicomatose. Positive physical findings at that time were: suboccipital craniectomy defect; burr hole on the right at lambdoid suture, with a tube leading from there to the right mastoid area; nuchal rigidity; vomitus in the pharynx; partial response to painful stimuli; eyes deviated to the left, with irregular rotatory nystagmus; a slight nasal blurring of the left disc margin; and a temperature of 150° F. The blood pressure was 160/110 mm. Hg, the pulse 160/min., and the hemoglobin 15 Gm./100 cc. The white blood count was 19,000/cu. mm., with a shift to the left. The urine contained 4 + albumin, and a number of red and white blood cells. A lumbar puncture showed an opening pressure of 120 mm. H_2O; the cerebrospinal fluid was yellow and turbid, contained 1,800 white blood cells, and had a glucose too low to read. Culture revealed gram-positive Diplococci. Gastric aspirate and stool examination both showed a 4 + Myers. A chest film at that time was thought to be normal, and skull films showed only the burr holes and the suboccipital craniectomy defect.

The patient was placed on supportive therapy, tube feedings, sulfadiazine, penicillin and Chloromycetin. During the next few days, her condition improved only moderately, i.e., she was more alert, the focal seizures ceased, the urinary output increased, and the temperature dropped slightly, although it continued to spike. However, on November 25, 1958, she developed a right hemiplegia and became less responsive. The next day, the tubing was removed from the ventriculomastoid shunt. Repeat cultures of cerebrospinal fluid grew nothing.

Achromycin and triple sulfas were substituted for penicillin and sulfadiazine, and the Chloromycetin was continued. On November 28, 1958, a left carotid angiogram was performed. No tumor staining or vascular anomalies were seen. There was rapid tapering of the internal carotid for approximately 1 cm. before its bifurcation. On December 2, 1958, the neurological findings were essentially unchanged, and no papilledema was seen. The chest had coarse rales bilaterally, and an x-ray showed bilateral parenchymal infiltrations and a left pleural effusion. A tracheotomy was performed because further respiratory distress had devedoped. A lumbar puncture on December 3, 1958, showed an opening pressure of 170 mm. H_2O, with slightly yellow fluid, 336 mg. protein, 43 mg. sugar and 24 cells. There was no growth on culture.

During the next two weeks, the patient's course remained essentially unchanged. Three ventricular taps were done. The last of these, on December 19, 1958, with the head in the left lateral position, showed an initial pressure of 210 mm. H_2O, a slightly cloudy fluid, 34 white blood cells and 58 mg. of sugar. Culture revealed hemolytic Staphylococcus aureus. From then on, the patient gradually became less responsive, and the temperature rose to 105° F., rectally. On January 8, 1959, there was aspiration of nasogastric feedings, followed gradually by a decrease in the respiratory rate, dilatation of the pupils and no response to noxious stimuli. Moments later, the patient was pronounced dead.

SUMMARY OF CLINICAL DISCUSSION

Dr. Paul Seebohm, Internal Medicine: The patient whom we are to discuss today presented a rather difficult diagnostic problem. Mr. Larson will give the students' opinion.

R. Larson, junior medical student: Our group feels that on the basis of the protocol and the literature, the facts as presented are best explained by an internal carotid artery occlusion, chronic and progressive. However, we cannot rule out the following: neurosyphilis; chronic meningitis; chronic degenerative brain disease such as Alzheimer's disease; tumor, metastatic or primary; a granuloma-like infiltration such as a sarcoid or eosinophilic granuloma; and chronic leukemic infiltrate.

We should have liked the following information: the serology for syphilis; tests for granulomatous diseases; and the results of a right-sided carotid angiogram. We feel that the later course of the disease was complicated by an acute, purulent meningitis, probably due to a pneumococcus and following the ventriculomastoid shunt. This meningitis could have occurred either with or without an abscess. The patient probably died of an overwhelming septicemia and pneumonia.

Dr. Seebohm: Thank you, Mr. Larson. I'll look for the laboratory test results that you asked for while Dr. Van Allen takes the podium.

Dr. Maurice W. Van Allen, Neurology: I think we can reasonably divide the protocol into two parts: first, the basic disorder apparently producing hydrocephalus, and second, the fatal complication of the ameliorative treatment of this disorder.

Why do we feel entitled to regard the meningitis as a complication and not as a part of the basic disease process? The ventriculomastoid shunt is notorious for its tendency to introduce meningitis, and the type of complicating meningitis is one that might be expected from a shunt into the nasopharynx. It was not due to organisms that commonly cause chronic meningitis.

There is a six-month history of rather nonspecific mental changes, headache, nausea and vomiting, with minimal physical findings. An unexplained hydrocephalus, at least in part communicating, was demonstrated. There was a temporizing measure to relieve the hydrocephalus, and the cause of the disorder was not found, even after posterior fossa exploration. Further information on this phase includes apparent improvement after the shunt had been established, with some residual mental sluggishness, decreased hearing and diminished vision, as possible clues to the original process. The second phase of the illness was introduced by a sudden deterioration in the patient's condition, due to pyogenic meningitis. It is quite doubtful that information gathered after that date can contribute substantially to our understanding of the original condition.

Fever, stupor, vomiting, rapid pulse, neck stiffness, deviation of the eyes, blurring of the discs, irregular nystagmus, focal left-sided seizures—all of these may be attributed to meningitis, as confirmed by lumbar puncture. The albuminuria was probably a manifestation of bacterial toxicity. Blood in the gastrointestinal tract from mucosal hemorrhages and ulceration is common in acute diseases of the central nervous system.

There was improvement under antibiotic treatment, but then a right hemiplegia followed, and there was a further decline in the patient's condition. The protocol notes that the angiograms revealed only a narrowing of the left internal carotid artery, before its bifurcation, with no evidence of a mass lesion. This is quite helpful. Apparently there wasn't a major abscess of the hemisphere on this side.

It is appropriate, at this point, for us to review the angiograms, and I shall ask Dr. Gillies to discuss them.

Dr. Carl L. Gillies, Radiology: In the carotid angiograms, the vessels appeared to be well filled. There was, perhaps, a slight narrowing of the internal carotid artery, but I think it was equivocal, and I believe the studies were essentially normal. There were defects in the base of the skull from a previous operation. A film obtained of the petrous apices showed the internal auditory meatuses quite well, and there was no evidence of erosion or enlargement. The lateral film showed evidence of the ventriculomastoid shunt operation.

Dr. Henry E. Hamilton, Internal Medicine: Then was there or was there not a tapering of the internal carotid for approximately 1 cm. before the bifurcation?

Dr. Gillies: Well, yes, there was some tapering.

Dr. Van Allen: It is not unusual for the carotid system to fill in the presence of hemiplegia due to vascular insufficiency. Hemiplegia may also occur in meningitis. It can be secondary to venous thrombosis or septic thrombophlebitis of the brain at various levels. Arteritis might occur, with resultant infarction. There may be a spreading cellulitis or cerebritis. This probably is not present here because there was a lack or distortion of vessels as seen in the angiogram. It is entirely possible that the increased metabolic demands exceeded the amount of blood available in an arterial tree

which was already compromised by atherosclerosis. In any case, the relationship of this complication to the original process is unclear, and therefore I am inclined to minimize its diagnostic significance.

The subsequent events, including probable aspiration pneumonitis, aren't out of keeping with the course of a poorly controlled meningitis produced by a hardy organism. Although clues to the original process might be found here, they cannot be separated from the context of meningitis as well as ventriculitis.

We might take a look at some other aspects of the case before returning to the main part of our discussion. One of the findings is strange. The pressure as measured by the manometer was remarkably low for a severe meningitis or for an abscess, and we might conclude that the shunt was responsible. After the shunt was removed, however, the pressure didn't rise remarkably. It is possible that a fistulous tract might have remained in spite of the removal of the tube.

It is well known that meningitis, due to a cerebrospinal leak to the outside (i.e., through a fistula) isn't usually associated with an increase in pressure because of the constant drainage. Ironically, the latter is important in the causation of the infection as well as beneficial in its treatment. This becomes evident after closure of a cerebrospinal fluid fistula when meningitis is only partially controlled. There usually is a severe recrudescence of the infection.

A few words about the ventriculomastoid shunt seem appropriate. The procedure was devised 10 or 12 years ago to relieve communicating hydrocephalus by establishing a shunt from a lateral ventricle to the mastoid. The cerebrospinal fluid flows out of the Eustachian tube into the nasopharynx via the middle ear. The procedure is simple, and can be accomplished under local anesthesia. The fluid that is drained out is swallowed, so that there is no loss of fluid or electrolytes such as takes place with ureteral shunts. Unfortunately, however, it establishes external drainage of the cerebrospinal fluid, and this is the sort of thing for which major corrective surgery is indicated under other circumstances. The high rate of complicating meningitis has discouraged the use of this procedure except for brief periods.

Now to return to the major problem. The clinical picture before meningitis was rather non-specific, but quite major in that headaches, nausea and vomiting followed a six-month course of mental change. Only nystagmus was found. One must infer that no sign or history of inflammation or hemorrhage in the meninges was uncovered, and possibly no lumbar puncture was done at first. Papilledema is not mentioned and can be presumed to have been absent. The relief of symptoms by spinal drainage and later ventriculomastoid shunt is evidence of increased pressure, and also is presumptive evidence of a communicating type of hydrocephalus.

One might reasonably presume, as the surgeon did, that an answer could be found through exploring the posterior fossa. What was he looking for? First, there could be a tumor extrinsic to, and compressing, the cerebellum and brain stem; or it could be intrinsic to these structures. Perhaps an abscess of the cerebellum could be present. Second, there could be a cyst obstructing outflow of cerebrospinal fluid from the fourth ventricle. Third, in the differential diagnosis, I should like to include an adhesive arachnoidal process—the latter perhaps secondary to an unrecognized infection or hemorrhage.

It is most disconcerting, of course, that he found nothing, and here lies the mystery. One would expect that a process in the meninges, which would interfere with absorption of cerebrospinal fluid might be manifest here and identifiable grossly and by biopsy. Such a process could, through chiasmatic arachnoiditis, prevent the occurrence of papilledema. It seems likely that the surgeon settled for such a process, since he apparently decided that the hydrocephalus could be relieved only by an externally-draining shunt. There is no supporting evidence for hemorrhage or infection, but at times a smouldering infection of the meninges may not be clinically identifiable. A neoplastic process spreading in the meninges could act in an entirely similar manner, but usually has a rapid course.

We must inquire as to whether a tumor in the third or fourth ventricle or posterior fossa was, in fact, overlooked both in the air studies and in the exploration. What are the neoplasms that might be considered?

1. Cyst or tumor of the third ventricle
2. Pinealoma or tumor of the quadrigeminal plate
3. An intrinsic pontine tumor (astrocytoma)
4. A tumor anterior to the pons (e.g., a meningioma) or chordoma of the clivus
5. Meningioma of the tentorium or over the convexity of the cerebellum
6. An "angle tumor" or eighth-nerve tumor
7. An intrinsic glial or hemangiomatous neoplasm of the cerebellum
8. A tumor of the fourth ventricle (e.g., an ependymoma).

The protocol doesn't state whether the vermis was split, and the fourth ventricle explored. There is a fair bony defect here, and thus we might presume that the exploration was extensive.

I have eliminated atrophic and degenerative processes for reasons previously given. Apparently this was a condition associated with increased pressure. On the basis of the available evidence, and prejudiced by knowing what is most often overlooked in ventriculograms and during explorations, I should like to narrow the possibilities a bit. The intraventricular tumors usually produce high pressure and papilledema, and are seen easily in ventriculography. They may produce very few other signs. The pinealomas produce eye signs

frequently, along with early obstruction and high pressure. A tumor anterior to the pons produces cranial-nerve dysfunction rather prominently, but it could be overlooked during exploration. Angle tumors usually give characteristic clinical signs before increased pressure becomes manifest.

A meningioma of the tentorium might be late in producing specific signs and might have been overlooked. It is difficult to believe that a tumor large enough to produce this patient's symptoms would have been missed in a standard exploration.

Although the intrinsic pontine tumors usually cause long-tract and cranial-nerve signs, these may come relatively late. Some degree of hydrocephalus is usually present, though high pressure is produced only late, by obstruction. Such a tumor could be missed on both air studies and exploration.

One is left without a firm positive foundation for diagnosis. The relative paucity of evidence, first of arachnoiditis and infection, and second, of localizing signs, would make one favor a neoplastic process. Considering and allowing for the probability that a third ventricular mass would have been seen in the ventriculogram, one would suppose that such a neoplastic process should be located in the posterior fossa. I am entitled to little beyond this, but considering all of the circumstances, I favor an intrinsic tumor of the pons.

Dr. Seebohm: The spinal fluid was cultured for bacteria and fungi, and except for the Diplococcus, no organisms were found. There were no skin tests for fungal infections. If a Wassermann test was done, it wasn't recorded on the chart, nor was it recorded by the outside hospital and home physician.

You asked about the ventriculograms, Dr. Van Allen. The physician who did the ventriculograms at the other clinic stated that the entire ventricular system was dilated, without any evidence of obstruction, though the lower end of the fourth ventricle didn't fill as well as it should have. He made that statement just before he said, "For that reason we felt that exploration was indicated."

Dr. Emory D. Warner, Pathology: This patient did have a tumor in the posterior fossa. It was a cerebellopontine angle tumor of the left eighth nerve. *Acoustic neuroma, neurinoma* or *neurolemmoma* are the terms used to designate this particular type of tumor. It was lying in the internal auditory meatus and was attached to the left eighth nerve. It measured 2.8 cm. in its greatest diameter. It was a rather mobile, ball-like tumor.

A chronic fibrosing plastic meningitis, with considerable superimposed acute focal meningitis, was present. Acute, as well as chronic, ventriculitis was fairly extensive.

These were two abscesses in the upper lobe of the left lung, with surrounding pneumonia. Each was approximately 3 cm. in diameter.

Aerobacter aerogenes was cultured from the blood and from the spinal fluid. At the time of death, neither pneumococci nor staphylococci were grown from the meninges, but both had been cultured prior to the patient's death. We presume, therefore, that the antibiotic therapy had brought the infection at least partially under control.

The first slide shows the acoustic neuroma which was involving the left eighth nerve. The second, a photomicrograph of the meninges from the base of the brain, shows a very thick plastic scarring of the leptomeninges, with more acute inflammation.

The next slide is a section of the ventriculum showing acute cellulitis with fibrinopurulent exudate on the surface. The ependymal lining is destroyed in this particular area, and cellulitis is spreading back into the brain substance, especially perivascularly. It spreads for a considerable distance as an active cerebritis, which in many foci was quite acute.

The two vertebral arteries, just proximal to their fusion to form the basilar artery, showed almost complete occlusion with old thrombus material that was organized and recanalized in each artery. The vertebral arteries were embedded in fibrotic meninges. There was, however, no infarction evident in the brain. There was one small area of hemorrhage in the right occipital pole. No gross lesion could be found in the brain substance, though such a phenomenon would have correlated with the right hemiplegia that the patient manifested during the latter part of her hospital course.

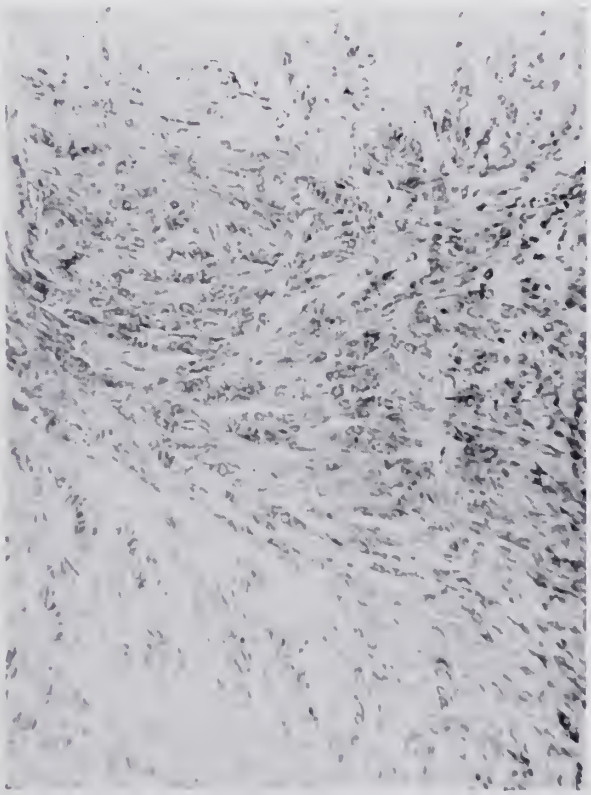


Figure 1. Acoustic neuroma involving left eighth nerve.

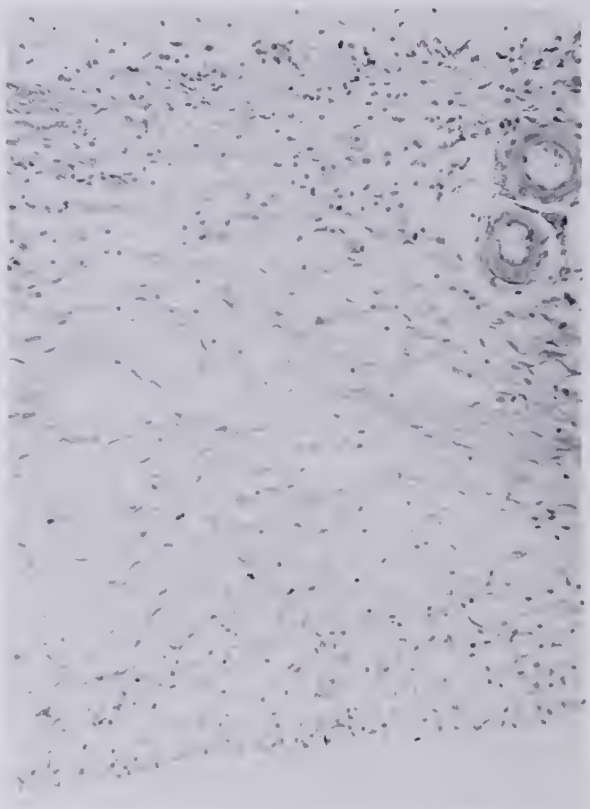


Figure 2. Meninges from base of brain. Very thick scarring of leptomeninges.

This slide shows a section of the neoplasm. Bundles of elongated cells forming the fasciculi of this type of tumor are well shown. There is only a slight palisading of nuclei. Often the palisading of the nuclei is quite conspicuous in this type of neoplasm.

There were small areas of cystic change, areas of old hemorrhage and yellowish areas of degeneration in which were many large phagocytic cells that were vacuolated with lipid to give a yellowish color in gross.

This photograph shows a section of lung, from the margin of one of the lung abscesses, and shows the organizing pneumonia. The process had not been present long enough for scar tissue to form around the abscess cavity. A little farther out from the abscess proper there is pneumonia that had not yet organized. Here, the inflammatory exudate is a protein precipitate with some fibrin and leukocytes.

An acoustic neuroma of the posterior fossa was apparently overlooked during the original suboccipital exploration. The tumor was almost pedunculated. It didn't seem to be compressing the fourth ventricle. It is difficult to see how it could have produced the obstruction, but it must have caused an intermittent stoppage that resulted in hydrocephalus. The meningitis wasn't present at the time of the original exploration.

The hemiplegia is not entirely clear to me. There were no lesions found in the substance of the brain to correspond to a right hemiplegia. This tumor was on the left, and perhaps could compress the brain stem sufficiently to produce some neurological signs. The severe meningitis could have compromised the circulation, but there was no infarction.

Dr. Van Allen: I think it has to be recognized that we lack definite evidence of the patient's having had increased intracranial pressure from the beginning. It is interesting to consider other possibilities here. The vertebral arteries were rather strikingly insufficient. Apparently there were no brain infarcts to go along with this. The carotid system was narrowed. Carotid insufficiency can result in mental changes and a chronic deterioration. I'd be hesitant to attribute headaches, nausea and vomiting to chronic vascular insufficiency of the brain, but the possibility should be entertained.

The tumor wasn't impressively large, and I should like to ask Dr. Sahs and Dr. Meyers for their opinions as to the relationship of this tumor to the patient's symptoms. Sometimes such tumors don't have to be large. They may produce vascular and other effects that can result in hydrocephalus. We could have used a little more solid and substantial evidence of increased pressure before this case became completely confused by the ventriculomastoid shunt and meningitis.

Dr. Seebohm: What do you have in mind when

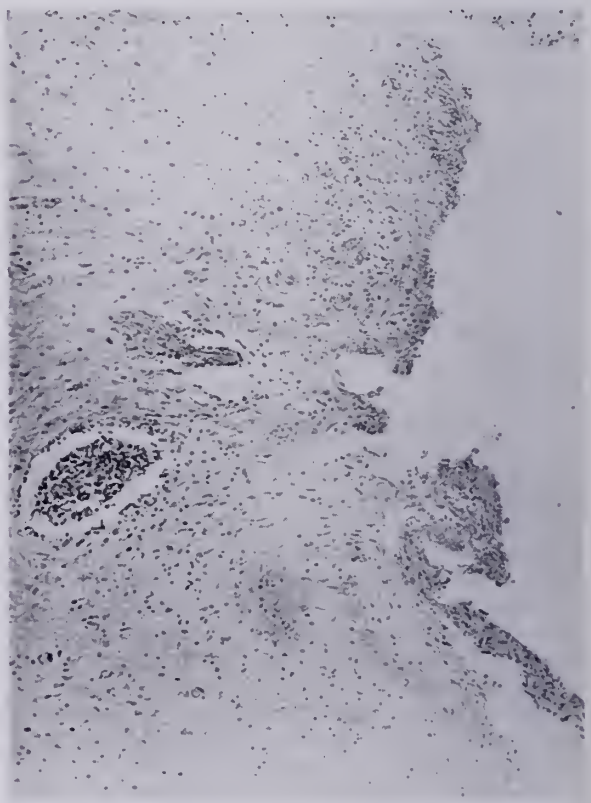


Figure 3. Ependyma showing acute cellulitis with fibrinopurulent exudate on surface.

you speak of "solid, substantial evidence," Dr. Van Allen?

Dr. Van Allen: The original spinal-fluid pressure, the appearance of the discs and, later, the ventricular pressure.

Dr. Seebohm: These were not reported in the summary we received from the other clinic where the patient was studied. It was stated that the patient did have severe headaches associated with nausea and vomiting, however, and she stopped work.

Dr. Arthur W. Horsley, resident, Internal Medicine: Was there a blood urea nitrogen or a creatinine determination?

Dr. Seebohm: There are no records of these tests. I might say at this point that people often think we purposely leave out helpful information when we develop these protocols. We leave out only what was unavailable at the time the patient was studied, plus the pathological findings.

Dr. Adolph H. Sahs, Neurology: The dimensions of this tumor were $2.8 \times 2.5 \times 1.7$ cm. This was a fairly large tumor, especially when located in the posterior fossa, and particularly when adjacent to the brain stem. It is entirely possible that when the patient arrived at the other clinic, she was unable to provide those elements of the history which are so useful in the diagnosis of acoustic neurinoma.

The textbook picture of acoustic neurinoma is as follows. In the majority of cases, the onset of symptoms occurs in the third to the fifth decade. The history is one of progressive loss of hearing in one ear. Unless one takes pains to perform caloric testing at that time, impairment of vestibular function may not be identified, in spite of the fact that a tumor is arising at the internal auditory meatus and is destroying the function of the vestibular and auditory divisions of the eighth cranial nerve. With the passage of time, there usually is an involvement of other cranial nerves. The fifth and seventh cranial nerves, in particular, are implicated. Signs and symptoms of pressure on the brain stem and cerebellum appear. Later, the patient develops manifestations of increased intracranial pressure.

There are many pitfalls in the diagnosis of an acoustic neurinoma, however. The patient and his relatives may have forgotten about hearing loss, and the involvement of cranial nerves may not be clearly evident in a stuporous patient. Finally, air studies may reveal hydrocephalus without identifying the exact point of obstruction of the cerebrospinal fluid.

Dr. Russell Meyers, Surgery: In an attempt to account for the communicating hydrocephalus in this case, we are obliged to consider not only the size and locus of the lesion, but also the individual variations in the anatomy of the posterior fossa. The latter differ in configuration at least as much as do the anatomic structures of the face, pelvis and limbs, from person to person.

An acoustic neurinoma situated at the left cerebellopontine angle could readily occlude the left foramen of Luschka. The subarachnoid space surrounding the midbrain and corresponding to the encircling incisura tentorium cerebelli could then be easily occluded by appropriate torsion and displacement of the brain stem to the right. This would provide conditions essential to the development of a communicating, rather than a non-communicating or obstructive, hydrocephalus. Proof of the existence of a communicating hydrocephalus requires the performance of a dye test—e.g., the introduction of indigo-carmine into a lateral ventricle and the demonstration within 20 minutes of a dye-stained cerebrospinal fluid drawn from the lumbar subarachnoid space.

Unfortunately, as Dr. Van Allen has indicated, we don't have the data from the hospital at which the patient was previously managed—data that would be necessary to establish whether a hydrocephalus existed and/or whether intracranial pressure was increased. From certain features of the story, however, I infer that both hydrocephalus and increased intracranial pressure must have existed prior to the exploration of the posterior fossa. If they had not been present, it would be difficult to explain why the neurosurgeon, when the results of his exploration had been negative, performed the Nosik operation (ventriculomastoid anastomosis), for this procedure is known to be useful only for the relief of progressive hydrocephalus.

The wisdom of employing this particular operation for the relief of hydrocephalus is quite another matter, and certainly may be challenged. Because of the risk it entails of retrograde infection from the mastoid cells, we haven't performed the Nosik operation at the State University of Iowa for several years.

The question has been raised as to whether a cerebellopontine angle tumor of this magnitude could have been easily detected at the time of surgery. The answer is "Yes." The question then arises as to why it wasn't so demonstrated. The answer to this must, of course, be a matter of speculation on our part, but I would venture the guess that an "angle" tumor simply had not been suspected on clinical grounds, and consequently that the surgeon planned and carried out a midline-incisional approach to the posterior fossa. Using this approach, he simply had no access to the most lateral recesses of the posterior fossa. Only the cerebellar vermis and the more medial portions of the cerebellar hemispheres were open to his inspection, palpation and probing. When the latter inquires had yielded no evidence of tumor, the conclusion that there was no tumor in the posterior fossa was illogically and regrettably reached. In my opinion, a crossbow incision would have made possible a full demonstration of the lesion.

There is yet a deeper lesson in this case for all of us to contemplate. This relates to one's general attitude as he embarks upon investigations of any sort, professional or otherwise. A persisting

agnostic orientation appears to me to carry high potentials for the successful resolution of problems. When one permits himself lightly to reach a positive conclusion on the basis of incomplete data, the outcome is all too often grave—or, as in the present case, fatal. The agnostic in similar circumstances would have said to himself, "My inquiry thus far, limited as it necessarily has been by the tools at my command, has revealed nothing unusual in the vermis and medial aspects of the cerebellar hemispheres. However, these don't constitute all there is in the posterior fossa, and while I am here, I can and should use such tools as I have in exploring the other parts of the posterior fossa—namely, the lateral portions of the cerebellar lobes and the lateral recesses." Then, like a good detective, the agnostic would have proceeded to revise his incision, remove the squamo-occipital bone more widely, and look directly down upon the petrous ridge of both sides. As we now see the case, such tactics would certainly have demonstrated the tumor. We cannot doubt that the outcome would then have been more salutary for the patient.

Dr. Seebohm: In answer to an earlier question, I can report that the BUN was 8 and the creatinine was 0.9

Dr. C. Drevets, resident, Internal Medicine: I should like to ask Dr. Gillies whether a normal petrous apex is to be expected in cases of acoustic neurinoma.

Dr. Gillies: It depends somewhat upon the location of the tumor. If the tumor is within the eighth nerve canal, in the auditory meatus, it will erode and enlarge it. I've asked Dr. Warner specifically, and he tells me that there was no bone erosion in this particular patient. For that reason, of course, the x-ray examination was negative. Our evidence, when present in cases of neurinoma, is indirect and due to erosion of either the internal auditory meatus or the petrous apex.

Dr. Seebohm: There isn't any statement in the hospital record regarding the patient's hearing. I presume that when she came to the hospital it was difficult to test her hearing, or at least to compare one ear with the other. It was stated that she was a cook, and had difficulties with her memory. That is to say, she was a cook before she quit work and went to the hospital. Part of her supposed memory problem, as regards customers' orders, could have been due to deafness.

Dr. Van Allen: I've just asked Dr. Sahs whether it isn't the rule that before an angle tumor produces hydrocephalus, some degree of facial palsy occurs, and he says, "Almost always."

Dr. Seebohm: Dr. Meyers, could we get back to the mechanical aspect of the exploration? Is this an area that normally can be viewed with ease from the suboccipital approach?

Dr. Meyers: There has been a tendency in recent years for neurosurgeons to abandon the crossbow incision that some of us older men were trained to use, i.e., making an incision from mastoid to mastoid and thus providing ourselves an ample opportunity to explore the cerebellopontine angle on both sides. There is a tendency nowadays to make midline incisions because they are much easier to close, but this technic limits exploration of the angles.

The other error that I should like to postulate is that of not considering the possibility of an acoustic neuroma at all. If the surgeon had any suspicion of the presence of this lesion, it was only a slight one. If he had entertained it seriously, he would have planned his exploration in such a way as to expose both the cerebellopontine angles, and would certainly have found the lesion. I presume that a midline linear opening was made; nothing was found in the vermis; a ventricular cannula was passed into each cerebellar hemisphere, but nothing was encountered along the axis of the cannula; and it was concluded that there was nothing abnormal in the posterior fossa.

SUMMARY OF NECROPSY FINDINGS

The most significant lesions were those involving the brain. There was an acoustic neurinoma on the left side, intimately attached to the eighth nerve, rather freely mobile, and 2.8 cm. in greatest diameter. It did not appear to compress the fourth ventricle, and the mechanism of the original obstruction is not entirely clear.

At the time of autopsy, both chronic fibrotic meningitis and patchy acute meningitis, plus acute ependymitis, were present. Chronically inflamed and thickened leptomeninges enveloped the base of the brain. These could well have produced the moderate diffuse hydrocephalus that was present at the time of death. The meningitis presumably was secondary to the operative procedure, however, and would not explain the onset of the obstructive symptoms.

The vertebral arteries just proximal to the basilar artery were greatly narrowed by organized thrombi. This thrombosis had not caused cerebral infarction.

There were two pyogenic abscesses in the upper lobe of the left lung. They were approximately 3 cm. in greatest diameter and were surrounded by organizing pneumonia.

Aerobacter aerogenes was cultured from the blood and from the cerebrospinal fluid. Neither pneumococci nor staphylococci were grown from the meninges at the time of autopsy.

ANATOMICAL DIAGNOSES

Acoustic neurinoma, left

Chronic leptomeningitis

Acute ependymitis and focal acute meningitis

Status post removal of right ventriculomastoid shunt

Hydrocephalus, communicating

Bronchopneumonia, with pyogenic abscesses, left upper pulmonary lobe

Pulmonary congestion and collapse. basilar, bilateral, minimal.

Coming Meetings

In State

Dec. 2 — **Lung Disease (SUI Dept. of Internal Medicine and Iowa Trudeau Society).** University Hospitals, Iowa City

Dec. 6-7 — **Surgery.** Medical Amphitheater, University Hospitals, Iowa City

Out of State

Dec. 1-2 — **A. Morris Ginsberg Memorial Seminar (University of Kansas Medical Center).** Menorah Medical Center, Kansas City

Dec. 1-2 — **Conference on Graduate Medical Education.** University of Pennsylvania Graduate School of Medicine, Philadelphia

Dec. 1-3 — **Western Surgical Association.** Hotel Statler, Detroit

Dec. 1-3 — **Retinal Detachment Surgery.** University of California at San Francisco

Dec. 1-3 — **Western Surgical Association.** Hotel Statler, Detroit

Dec. 3-8 — **American Academy of Dermatology and Syphilology.** Palmer House, Chicago

Dec. 4-9 — **Radiological Society of North America.** Netherland Hilton Hotel, Cincinnati

Dec. 4-9 — **Course on Health Mobilization Program for Emergency Hospital Management (USPHS and Office of Civil Defense Mobilization).** OCDM Eastern Instructor Training Center, Brooklyn

Dec. 4-9 — **Radiological Society of North America.** Netherland Hilton Hotel, Cincinnati

Dec. 6-8 — **Southern Surgical Association.** Boca Raton Hotel, Boca Raton, Florida

Dec. 8 — **Society of Biological Psychiatry.** Hotel Roosevelt, New York City

Dec. 9 — **American Rheumatism Association.** Sheraton Dallas Hotel, Dallas

Dec. 9-10 — **New York Heart Association Symposium on the Myocardium, Its Biophysics and Biochemistry.** Waldorf-Astoria Hotel, New York City

Dec. 9-10 — **Cataract Surgery.** University of Kansas Medical Center, Kansas City, Kansas

Dec. 10 — **Treatment of Selective Hematologic Disorders.** University of California at Los Angeles

Dec. 10-11 — **Academy of Psychoanalysis.** Hotel Biltmore, New York City

Dec. 12-16 — **Below-Knee Prosthetics.** University of California at Los Angeles

Dec. 12-16 — **Regional Symposium on the Use of Radioisotopes in the Study of Endemic and Tropical Diseases.** Bangkok, Siam

Dec. 15 — **The Adolescent (second program in the series "Medicine and the Family Physician").** University of Kansas School of Medicine, Battenfeld Auditorium, Kansas City

Dec. 15-16 — **Vocational Rehabilitation Institute.** University of Kansas Medical Center, Kansas City

Dec. 15-17 — **Consultations on Problems in Practice (Office of Postgraduate Education, Univ. of Oklahoma Medical Center and Oklahoma State Medical Assn.).** University of Oklahoma Medical Center, Oklahoma City

Dec. 20 — **Emergency Surgery of the Hand (fourth program in the series "General Medicine and Surgery").** The Moila Temple, St. Joseph, Missouri

Dec. 27-Jan. 14 — **Bahamas Surgical Conference.** British Colonial Hotel. Nassau, Bahamas

Jan. 3-7 — **Introduction to Electrocardiography for General Physicians.** Center for Continuation Study, University of Minnesota, Minneapolis

Jan. 7 — **Northwest Society for Clinical Research.** Hotel Georgia, Vancouver, B. C., Canada

Jan. 8-13 — **American Academy of Orthopaedic Surgeons.** Hotel Americana, Bal Harbour, Miami Beach, Florida

Jan. 8-14 — **Seventh Annual General Practice Review.** University of Colorado Medical Center, Denver

Jan. 9-12 — **White House Conference on Aging.** Washington, D. C.

Jan. 9-13 — **Recent Advances in Drug Therapy (American College of Physicians).** Health Sciences Auditorium, University of Washington School of Medicine, Seattle

Jan. 9-20 — **International Clinical Postgraduate Program (University of California Extension).** Mexico City (January 9); Acapulco (January 15); Guadalajara (through January 20). For additional information write University of California Medical Center, Los Angeles 24

Jan. 12-14 — **Ninth Annual Cancer Seminar (Arizona Division, American Cancer Society).** Tidelands Motor Inn, Tucson

Jan. 14 — **Symposium on Eye Problems in Children.** Children's Hospital, San Francisco

Jan. 16-18 — **Sectional Meeting, American College of Surgeons.** Hotel Dinkler-Tutwiler, Birmingham

Jan. 16-20 — **Mechanisms of Disease (American College of Physicians, Columbia University College of Physicians and Surgeons).** Presbyterian Hospital, New York City

Jan. 17 — **Technic of Office Psychiatry (Third in the Series "General Medicine and Surgery").** Southeast Kansas Tuberculosis Hospital, Chanute, Kansas

Jan. 17 — **Newer Pulmonary Syndromes (Fifth in the Series "General Medicine and Surgery").** The Moila Temple, St. Joseph, Missouri

Jan. 18 — **Long Beach Heart, Cancer and TB Third Annual Medical Symposium on Diseases of the Heart, Lungs and Chest.** Long Beach Petroleum Club, Long Beach

Jan. 18-20 — **Ninth Postgraduate Course in Diabetes and Basic Metabolic Problems (American Diabetes Association).** School of Medicine, Louisiana State University, New Orleans

Jan. 19 — **Neurology (Third in the Series "Medicine and the Family Physician").** University of Kansas School of Medicine, Battenfeld Auditorium, Kansas City

Jan. 19-20 — **Obstetrics & Gynecology.** University of Nebraska College of Medicine, Omaha

Jan. 23-25 — **Twelfth Annual Postgraduate Course in Medical Technology.** University of Kansas Medical Center, Kansas City

Jan. 23-25 — **Twenty-Fifth Annual Session of the International Medical Assembly of Southwest Texas.** Granada Hotel, San Antonio

Jan. 23-26 — **Sectional Meeting, American College of Surgeons.** Hotels Del Prado, Reforma, Vista Hermosa, El Presidente, Alffer, Continental Hilton, Mexico City, Mexico

Jan. 23-27 — **Below-Knee Prosthetics.** University of California at Los Angeles

Jan. 23-27 — **Thirtieth Annual Mid-Winter Convention in Ophthalmology and Otolaryngology.** Statler-Hilton Hotel, Los Angeles

Jan. 26-28 — **Annual Cardiovascular Seminar (Northeast Florida Heart Association).** Prudential Auditorium, Jacksonville, Florida

Jan. 26-28 — **Otolaryngology for Specialists.** Center for Continuation Study, University of Minnesota, Minneapolis

Jan. 26-28 — **Rocky Mountain Traumatic Surgical Society.** Aspen, Colorado

Jan. 26-28 — **Western Society for Clinical Research.** Carmelby-the-Sea, California

Jan. 27 — **Fresno County Heart Association, Ninth Annual Central California Cardiovascular Symposium.** Fresno Elks Club, Fresno

Jan. 30-Feb. 3 — **Clinical Congress of Abdominal Surgeons.** Deauville Hotel, Miami Beach

Jan. 30-Feb. 3 — **Vaginal Approach to Pelvic Surgery.** Cook County Graduate School of Medicine, Chicago

Jan. 30-Feb. 10 — **Surgical Technic.** Cook County Graduate School of Medicine, Chicago



THE ERADICATION OF TUBERCULOSIS

We surely hope that no one, this year, discontinues his annual practice of buying and using Christmas Seals because of the mistaken belief that the fight against tuberculosis has ended or is nearing its end. On the contrary, the activities of the National Tuberculosis Association and its state and local divisions are more necessary than ever. Moreover, there is a need, right here in Iowa as well as elsewhere, for greater expenditures of effort and money by both private and governmental agencies in tuberculosis case finding and in making sure that all infected individuals receive treatment until they no longer are threats to their fellow citizens.

There has been a widespread and altogether unfortunate misunderstanding of the reasons for the closing of the nation's most famous TB hospital, at Saranac Lake, New York, and the curtailing of similar services throughout the country and locally at Broadlawns-Polk County Hospital, in Des Moines. Though there are somewhat fewer cases of active tuberculosis than there were just a few years ago, it is a change in the technic of therapy that has been chiefly responsible for the decline both in numbers and in lengths of TB hospitalizations. Most such patients can now be treated either partially or entirely in their homes.

The major problems in tuberculosis control at the present time are those of case finding and getting patients to keep up their treatments and otherwise protect the uninfected individuals with whom they come into close contact. In precisely these segments of TB-control work, the Tuberculosis Association's programs of free chest x-rays, tuberculin tests and public education can be most effective. They deserve continued and, indeed, increased support!

In the many years of the TB-control effort, successive goals have been set, based on the discovery of new tools or the development of new technics. Each goal has been just a little higher than the people who set it could possibly hope to achieve. Thus, the early sanatorium movement set for itself the goal of isolation of all patients. The next goal (in the 20's) was early detection of all patients by medical examinations. In the 30's the aim was to make enough tuberculosis beds available for all patients. The 40's saw the development of early detection through mass x-raying to find the cases hidden among apparently healthy populations. In the 50's, with the coming of the new drugs—especially isoniazid—successful treatment of every patient was projected.

The new goal in the war against tuberculosis, formulated at the Arden House Conference just a year ago, is "to sterilize that important part of the reservoir of tubercle bacilli that presently exists throughout the country in persons currently suffering from active tuberculous disease, whether presently known or unknown to public health authorities, and in selected persons who previously have had active disease and were inadequately treated."

In achieving that goal, the current and familiar activities of the Tuberculosis Association and the State Department of Health will play important parts, but individual physicians in private practice have greater responsibilities than ever before. Almost all TB patients leaving hospitals nowadays are expected to continue taking their drugs after they reach home, and the physicians to whom they are returned, to the very limits of their ability, must make sure that those patients are faithful to their prescribed regimens.

Yet, there is a limit on what the private practitioner can do, and here government must be urged to act. Professional ethics prevent a doctor's insisting as strongly as he otherwise might upon a patient's remaining under his treatment for as long a time as may be necessary. Indeed, he cannot insist that a patient accept his care in the first place. But government can do these things, and it should do them.

First, our health departments should assemble and maintain comprehensive TB case registries. U.S.P.H.S. studies show that almost 40 per cent of patients are leaving hospitals against medical advice, and that 16.6 per cent of non-hospitalized patients who need supervision are not getting it.

Second, after locating such people and making arrangements to keep continuous tab on them, the government should take steps to compel them to continue drug therapy and observe the restrictions that have been put upon their activities until they are no longer a danger to others.

Early last summer a committee was formed to plan the setting up of a TB case registry in Iowa, in major part at TB Association expense. But as we understand it, the enthusiasm of the members was dampened considerably when they learned that the State Department of Health would lack money with which to carry on the necessary follow-up activities. If this is true, doctors may want to urge the 1961 General Assembly to provide the requisite funds.

Right now, there is a good chance that tuberculosis can be altogether eradicated within a relatively few years. But without increased effort on

the part of the Tuberculosis Association, the doctors and the Department of Health, the reservoir of infection may become larger and the chance may be lost.

LET'S MAKE INDIVIDUAL GIFTS TO AMEF

Through the mails last month, every member of the Iowa State Medical Society received a request for a contribution to medical education from the state AMEF committee. This is an official committee of ISMS, and the work that it is trying to accomplish is exceedingly important to the future of medicine. We urge your thoughtful consideration of this appeal.

The medical colleges of America are in serious financial trouble. The immediate and future demands for physicians far exceed any foreseen expansion. Real income has been reduced, and costs have constantly increased. Tuition, however, can easily go so high as to become prohibitive.

Even state medical school deans are constantly confronted with financial problems. The medical school requires such a disproportionate share of the state university's budget, when one considers the relatively small number of medical students, that it is often difficult for the dean of medicine to obtain an adequate legislative allotment for essential new or supplemental expenditures.

As physicians, we cannot allow the quality of medical education to falter, any more than we can endorse malpractice. We can make scholarships available to top-calibre students, prevent the loss of inspirational teachers by providing for adequate salaries, and provide up-to-date equipment for proper training. These are just some of the important accomplishments that our contributions facilitate.

During 1959, only 20 per cent of the physicians in the State of Iowa contributed to medical education either directly to the schools or through the American Medical Education Foundation. The S.U.I. College of Medicine has received over $40,000 from the AMEF in the past three years, but the AMEF's receipts from Iowa physicians have totaled only $25,624 during the same period. Iowa is not a poor state, nor are we burdened with excessive numbers of non-paying patients. Let's change this picture to a record we can be proud of, by making significant contributions to the support of medical education through the AMEF!

AMEF contributions can be earmarked for any medical school in the United States, and the school named will then receive the entire gift. Non-earmarked gifts can be made, and they are divided equally among all 85 medical colleges in the United States. Contributions can also be divided among two medical schools in whatever proportions the donor specifies.

The deans of the medical schools, your future colleagues and all of your present colleagues in the medical profession will appreciate your generous response to the appeal that reached your office in November. Medical education needs your help. We hope you will give this matter your deepest consideration and your support.

INFLUENZA IMMUNIZATION

An analysis of the excess mortality that occurred during the epidemic of influenza in 1957-58 and again in 1960 has served as a forceful reminder that influenza is still a major contributing cause of death. Such an analysis reveals, furthermore, that there are certain individuals for whom influenza is an especially serious peril. If, as the vaccine trials have indicated, inoculation is effective in preventing 70 per cent of cases of the disease, then approximately 60,000 of the 86,000 excess deaths during the influenza epidemics could have been prevented by adequate immunization.

The high-risk groups of people whom the U.S.P.H.S. believes should be immunized routinely each year include:

1. Persons of all ages who suffer from chronic debilitating disease, in particular (a) rheumatic heart disease, especially mitral stenosis; (b) other cardiovascular diseases such as arteriosclerotic heart disease or hypertension—especially patients with evidence of frank or incipient insufficiency; (c) chronic bronchopulmonary disease, for example, chronic asthma, chronic bronchitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema or pulmonary tuberculosis; (d) diabetes mellitus; and (e) Addison's disease.
2. Pregnant women.
3. All persons 65 years of age or older.

The adult dosage recommended by the U.S.P.H.S. advisory committee for initial immunization is 1.0 cc. (500 cca units) of polyvalent vaccine, administered subcutaneously on two occasions separated by two or more months. Preferably, the first dose would be given no later than September 1, and the second no later than November 1. Persons previously immunized with polyvalent vaccine should be reinoculated with a single booster dose of 1.0 cc. subcutaneously each fall, prior to November 1. The only contraindication to vaccination would be a history of food allergy to eggs or chicken, or a prior history of allergic reaction to an egg-produced vaccine such as the commercial influenza product.

Obviously, the optimum time for these routine vaccinations has already passed for this year, but it seems that in this instance physicians can act on the adage "Better late than never."

Late next summer, and late in the summers of succeeding years, all of us would be well advised

to send reminders to all of our patients in these three classifications, in an effort to make sure that they receive protection. They should have it regardless of the anticipated incidence of influenza for the succeeding winters.

LEGISLATING HEALTH AID

To the Editor of THE NEW YORK TIMES:

To promote informed discussion of a vital national problem, may I criticize, I hope thoughtfully, your editorial advocacy (May 10, Aug. 14 and Aug. 25) of the Social Security approach to provide health aid for the elderly.

An understanding of the Social Security financing method comes first. On June 20 the Supreme Court of the United States said:

"The Social Security System may be accurately described as a form of social insurance . . . whereby persons gainfully employed, and those who employ them, are taxed to permit the payment of benefits to the retired and disabled and their dependents. . . . Each worker's benefits . . . are not dependent on the degree to which he was called upon to support the system by taxation."

Actuarial Study No. 49 of the Social Security Administration states:

"The essential security of this plan rests, in the final analysis, upon the taxing power of the United States Government and the willingness of the people to have it exercised."

LEVY ON ACTIVE WORKERS

European actuaries call this method *assessmentism.* As distinguished from prepaid private insurance, it is a postpaid system by which taxes are levied on active workers to pay the cost of benefits as and after payees become entitled to them.

Under the Forand and Kennedy-Anderson bills, a complete legislated gift is made to the present aged, and a substantial partial one to most of the present active workers, since employe taxes would cover but a minor fraction of the value of benefits. How you can say this legislated gift is not a "hand-out" is difficult to understand.

The young insurance clerk raising a family would pay taxes so that the retired insurance executive, enjoying his company pension and tax-free Social Security, could also enjoy a free medical care benefit.

It is a deception to use the term "paid-up" in saying, as Senator Henry Jackson did (NEW YORK TIMES, Aug. 28), "Forty-three Democrats and only one Republican voted for the plan, which would have given 9,000,000 elder citizens a life policy of paid-up medical insurance under the Social Security system."

Referring to the compulsory taxation discussed in Earl J. Weinreb's letter published Sept. 2, the American people have accepted with little objection the principle of paying Social Security taxes since most of us have paid but a small fraction of the value of the benefits. It is an unwarranted conclusion that if the American people, particularly the young, including nonvoters, fully understood the implications of the financing method, they would happily pay the taxes.

GROWTH OF MEDICAL CARE

Your reference to a "slight increase in those taxes" ignores the great potential growth of medical care benefits under the Social Security system. The age-68 limitation in the Kennedy-Anderson bill, adopted to keep down the initial cost, was a device employing the "foot-in-the-door" technique with a complete failure to face the ultimate cost of the Society Security path.

It is unrealistic to assume that this path cannot lead to great expansion of types of benefits and persons covered. A resulting cost of many billions will require something more than a "slight increase" in taxes.

The Government, in some way, would have to assume responsibility for the quality and quantity of the services promised. (See the article by Osler L. Peterson, M.D., of Harvard in the September ATLANTIC entitled "How Good Is Government Medical Care?")

The provision of medical care benefits under the Social Security system would introduce an entirely new principle involving services, rather than cash, of a kind that could not operate on the minimum-floor principle. Ardent proponents of the Social Security approach (the AFL-CIO, American Welfare Association, Senator Kennedy's Social Security adviser, Wilbur Cohen) advocate comprehensive, "first dollar" benefits.

RAY M. PETERSON,

Fellow, Society of Actuaries; Vice President and Associate Actuary, Equitable Life Assurance Society.

Port Washington, N. Y., Sept. 2, 1960.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 23-26, 1961

Veterans Memorial Auditorium

Des Moines

Three's a Crowd

MR. ROBERT B. THROCKMORTON

DES MOINES

MEDICINE HAS PROBLEMS. The doctor who began practice in the 20's or 30's was forced, 10 or 15 years later, to master the use of the new "miracle" or the only "mildly-miraculous" drugs that developed in sudden profusion. He was also called upon to understand the greatly improved surgical technics and to grasp the growing emphasis on psychosomatic medicine. At the same time, he began to see many more patients per day, mostly in the hospital, office or clinic, rather than in their homes. The age of specialization was upon him, and there were pressures which made him think about group, rather than solo, practice. He found himself supervising more aides and technicians than before, wondering whether he should redecorate his office or build a new clinic, trying to cope with a flood of insurance and government forms that appeared with every mail—not the least of these being the income tax forms which forced him to improve his bookkeeping system and rely on the assistance of a tax advisor. He was being called upon to testify in court with increasing frequency, and always at an inopportune time, for there really was no opportune one. And he found himself becoming more worried about malpractice as the verdicts went up and almost all cases seemed to go to juries.

Also, there is no question that his hospital staff became more active, and in addition to its mandatory monthly meetings there often were special sessions. Additional committees were appointed, and he was expected to serve on some of them. He also had to maintain better and more complete records on the increasing numbers of patients he was seeing. Organized medicine at the county, state and national levels became more active, and it too created committees on which he felt obligated to serve.

This routine kept him busy for an average of 60 hours per week, and he was lucky if he got seven hours' sleep a night. Somehow, in his spare time, he wanted to be a good "family man," and also to continue active in church and community affairs. His fellow citizens, at times, seemed to get the impression that he had lost interest in the problems which were so important to the community and that he perhaps was letting them down. He was also being encouraged to take a more active interest in politics and legislative matters, for there were many new issues on which he could render valuable assistance, particularly at the "grass roots" level.

Mr. Throckmorton is the legal counsel of the Iowa State Medical Society, and he made this presentation at a meeting of the Prairie Club.

SOCIAL, ECONOMIC AND POLITICAL PROBLEMS

While the individual practitioner was solving his professional and personal problems in a way which permitted America to have the highest quality of medical care the world had ever known, doctors as a group were confronted with social, economic and political problems, some of which threatened the very foundations of their profession.

When called upon to consider these new developments in his "spare time," the individual doctor reacted abruptly and sometimes violently in opposition to proposals that he thought constituted "socialized medicine." The man on the street thought him justified, at first, but as the term *socialized medicine* was applied with increasing frequency to a succession of schemes, it began to lose its gloss, and doubts arose in the layman's mind as to what new programs, if any, would *not* be so branded. Accordingly, the average man began to say, "Medicine is always *against* everything, and never *for* anything," and to add, "Doctors are doing more than any other group to promote socialism."

The pressures on medicine have come largely from actual or threatened interference by government. Successive proposals have been met, by organized medicine, on an *ad hoc* basis, without too much time spent on analysis or philosophy. Medicine's basic objective has been to find what departures could be made from the traditional pattern of medical economics without an abandonment of the established principles that have produced a great profession and an eminent quality of medical care.

There has been no general agreement among doctors as to just where the line of resistance should be drawn. Physicians have been more willing than has generally been supposed to face up to actual problems and to accept the best of the "new" if the best of the "old" could be preserved. At varying times, medicine has relied upon one or more of the following concepts to justify its position:

(1) The free choice of physician is essential.

(2) The practice of medicine by corporations is illegal.

(3) Fee-splitting cannot be condoned.

(4) Physicians must remain self-employed.

(5) The fee-for-service principle must be preserved.

(6) Socialized medicine means poor medicine.

(7) No "third party" may be permitted to come between doctor and patient.

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states the line of resistance which medicine should adopt, I think that my choice must be the last of them. Hence, my title "Three's a Crowd."

The wisdom of the saying "Three's a Crowd" is apparent to anyone who is or ever has been in love. Yet, if American comedy is to be believed, it occasionally happens that after the honeymoon is over a cantankerous and dominating mother-in-law suddenly appears to cast a blight on the idyllic relationship of the marriage partners.

Similarly, the relationship between physician and patient, like those between attorney and client and between minister and parishioner, has been regarded as highly personal and privileged. Most of the serious social, economic or political problems that have been thrust upon the medical profession have involved the sudden introduction of a third party into the heretofore private relationship between patient and physician.

It is now apparent that the question to be resolved is not whether medicine should oppose *all* third-party intervention, for third parties can at times resemble the sympathetic mother-in-law who invites the young couple over for Sunday dinner or offers to baby-sit while they go out for an evening. It is equally obvious, however, that third parties can play the role of the domineering and demanding mother-in-law, in which event medicine has no course of action other than total resistance if it is to maintain its character and independence—always hoping, of course, that the old girl may undergo a change of personality or at least move to California.

THE FEDERAL THIRD PARTY

The federal government employs many doctors through the Armed Forces, the Veterans Administration, the Public Health Service and other agencies. As an employer, it is in the position of being a dominant third party. To the extent that the employed physicians treat individual patients primarily for the benefit of those patients, such practice constitutes socialized medicine. However, because the federal government is competing with the private practice of medicine to secure and retain doctors, it has necessarily provided compensation and working conditions that are not unattractive. In general, it can be said that the federal government's role as third party in these instances has not unreasonably interfered with the doctor-patient relationship.

One may well ask whether the third-party role of the federal government would continue to be as benign if most doctors were employed thus, and if there were little or no chance of their leaving their posts to enter or reenter private practice. Although the opposition to federally financed health care for additional segments of the population has been successful thus far on the grounds that it would constitute still another confiscation of a major area of private enterprise, a more specific reason for opposing it is that it would place the federal government in an increasingly dominant third-party role, capable of imposing unreasonable restrictions on the practice of medicine.

The proponents of national compulsory health insurance are attempting to reach their objective through a series of piecemeal amendments to the Social Security Act, and to date they have been most successful in the "disability" field. The so-called "disability freeze" preserved for the worker the Social Security benefits which had accrued to him up to the time of his becoming disabled, even though his right to begin drawing those benefits was deferred until he attained 65 years of age. The next amendment entitled him to begin receiving the same benefits at age 50 that he otherwise would not have begun getting until he reached 65. Under the amendment adopted shortly before this year's national election, the disabled can begin drawing Social Security benefits without any waiting period at all.

The AMA opposed these amendments, firmly but not violently, for the most part because it recognized them as the opening wedge to the program originally contained in the Wagner-Murray-Dingell Bill. Organized medicine also opposed it from the conviction that the long-range Social Security program is unsound. The latter is a legitimate objection, but it does not involve the practice of medicine as such.

How do these Social Security amendments fare when the "third party" test is applied? Is it true that "disability" is a medical decision and that doctors will be subjected to greater and greater political pressure to find "disability" when payments from government, rather than a private insurance carrier, are involved? Well, perhaps. But the threat to the doctor's freedom posed by this particular program is not the threat of dictation by the federal government, and the AMA wouldn't have opposed these amendments if the "third-party" test were the only one to be applied.

The remaining proposals for amending the Social Security Act, however, do constitute serious "third-party" threats. The Forand Bill and the Kennedy-Anderson Bill, which would provide free medical and/or hospital care for all persons receiving Social Security benefits, would necessarily give rise to a considerable degree of dominance by the federal government in the doctor-patient relationship. Moreover, experience with the Social Security Act leads one to the conclusion that it will continue to be broadened, and that enactment of either the Forand or the Kennedy-Anderson proposal would reasonably lead to an ever-increasing dominance by the federal third party.

A new federal program has grown up during the last few years—one that has not become well known to the public. It is called "Medicare." It is a program whereby medical and hospital care is afforded to the dependents of servicemen at government expense. The scheme was accepted by

the medical profession as an improvement over the past practice of drafting doctors and placing them in uniform in order that they might treat the wives and children of servicemen at military hospitals and installations. The serviceman's dependent is furnished an identification card which he or she may present to any physician who has agreed to participate in the program. The physician has agreed to charge his ordinary fees for his services, but not to exceed a maximum established by a fee schedule on which the State Medical Society and the federal agency have settled.

As regards the third party in this program, Medicare had auspicious beginnings. In many states the medical society was made the fiscal agent of the government, so that all claims were originally processed and reviewed by the doctors themselves. There was no serious difficulty in agreeing upon a maximum fee schedule, and the officers in charge of the federal program made it clear that they had no desire to become a dominant third party. Experience, however, has brought a change both in the attitude and the practices of the military in regard to Medicare. Congress reduced appropriations for the program, and the administrators adopted the bargaining, at-arm's-length, technic in renegotiating fee schedules. Medicine recognizes that it must be fair and reasonable in its relationships with government under this program if doctors are to remain the dominant party. However, medicine has reason to feel that it is permitted to be the dominant party by sufferance only, and that at some future date federal dominance may be asserted.

The federal government has been a benign third party in carrying out its program for the rehabilitation of the disabled and handicapped. This has been accomplished by retaining private practitioners of medicine, on a part-time basis, to serve as the medical directors of the program, and by giving them enough authority so as to minimize federal control.

Other important federal activities in the health field include the Hill-Burton hospital-construction program, research grants, and aid to medical education. These programs do not directly involve the doctor-patient relationship and, in general, medicine has supported them to date. It is, of course, conceivable that the federal role might become too dominant in these sensitive areas of medical research, medical education, and hospital construction and administration, and any tendency in that direction would invite opposition from organized medicine.

THE STATE AS THIRD PARTY

State mental health institutes have traditionally employed psychiatrists to provide medical attention to patients in the institutions. These physicians have ordinarily been free to practice without intentionally imposed limitations upon their professional judgment and ability. However, the state government, more often by inaction and inattention than by design, has oftentimes permitted conditions to develop which set serious limitations upon the doctors' ability to provide treatment, and these have worked to the detriment of physician and patient alike. Although these conditions are rapidly being remedied, there remains the basic issue of whether the dominant voice in administering these institutions should be that of medicine or that of lay persons. In Iowa, it now appears generally agreed that the director of mental institutions should be a physician, and that the psychiatrists working under his direction should be given as much freedom in their professional activities as available funds permit.

A question that has arisen in many states concerns the private practice of medicine by the faculty members at state medical colleges. It is recognized that the medical school faculty should be composed of outstanding physicians, and that they should have an opportunity to practice enough medicine to maintain and improve their skills. Further, it is agreed that they must be adequately compensated if they are to remain in the teaching field. As a result, these teachers of medicine oftentimes maintain modest private practices, most frequently at the hospitals connected with the medical schools. However, in most states there has been a temptation for the university itself to seek to profit from and to subsidize itself by means of the medical care so rendered. At this point, the university is likely to become the dominant "third party" in the relationship between the physician-faculty member and the patient. This problem came to a head in Iowa several years ago, but has been satisfactorily resolved.

There is another program, instituted no more than 23 months ago, in which the state government and the federal government are jointly the third party, which bears the somewhat degrading name of the "vendor payment program." In a companion set-up, yet to be authorized in Iowa and referred to as the near-needy program, the state and federal governments together will be similarly involved. The "vendor" in each of these arrangements is a doctor of medicine, osteopath, dentist, chiropractor or pharmacist, as the case may be, and the program is administered by the State Department of Social Welfare for the benefit of individuals over 65 years of age who are demonstrably unable to pay the full costs of health care for themselves. Payment is made to the "vendor," rather than to the recipient of the service because experience has shown that funds for this purpose that are allowed to pass through the hands of the patients have seldom found their way, intact, to the people who furnished the medicines or rendered the services. For this reason, physicians and other practitioners are not to bill the patient but are to bill the county board of social welfare in order to receive direct payment from federal and state funds.

Once again, the doctors, acting through their State Medical Society, are having to agree that they will accept fee schedules that are considerably below their usual ones because of the indigent character of the patients involved. Here again, the cooperation and understanding on the part of the governmental agency was virtually complete at the start of the program. But once again there is need for vigilance on the part of physicians to make certain that the government does not evolve into a dominant third party to the detriment of the patient, the physician or both.

THE PRIVATE THIRD PARTY

Perhaps the most far-reaching developments of all have involved neither the federal nor the state government, but have involved private agencies in the role of "third party." Physicians traditionally have been retained or employed by industrial employers who wish, for the protection of their own interests, to provide certain medical services to their employees. These have included insurance examinations, physical examinations preliminary to employment, emergency and first-aid treatment at the place of employment, and workmen's compensation examinations. Thus, an employee who has suffered a heart attack at his place of employment is given preliminary medical care by the plant physician, but then is referred to his family physician as soon as he has been moved from the employer's premises.

Although industrial medicine has grown and is to be found in virtually all localities, there is still some confusion about whose interests the physician should regard as paramount in this type of practice, and about the proper dividing line between industrial and private practice. The line that has been drawn, namely that of serving the employer's rather than the patient's interest, primarily, has proved workable in practice and has given rise to no serious problems. The key to the generally satisfactory relationship in which the industrial physician does his work is that the doctor is retained by management to render medical services primarily for the benefit of management, so that the doctor-patient relationship is only incidental. The arrangement immedately becomes objectionable if the primary purpose is to provide medical service for the benefit of the employee, for the doctor-patient relationship then becomes paramount, and the employer is then a "third party."

A second type of private third-party arrangement consists of insurance written by private insurance companies, particularly policies which provide medical-surgical and major medical coverages. Although the insurance industry originally showed some reluctance about entering this field and about expanding the conservative coverages originally offered, it has recently become quite aggressive and has produced such experimental policies as the major medical, with deductible features, and also coverage for persons over 65 years of age.

The distinguishing feature of private insurance is its *indemnity* characteristic. Because the insurance company does not pay the doctor directly, but pays the patient a flat amount in accordance with the terms of the policy, the traditional fee-for-service arrangement between doctor and patient can be preserved. The third-party insurance carrier provides some of the funds to enable the patient to pay his doctor bill, but does not seek to dominate the doctor-patient relationship.

Doctors are becoming increasingly aware of the fact that private insurance coverage imposes the fewest limitations and restrictions upon the free practice of medicine of any of the prepayment plans. Accordingly, there is a growing degree of mutual understanding and cooperation between medicine and the insurance industry, and medicine is beginning to realize that private insurance can be successful only if doctors will voluntarily prevent some of the abuses that other types of prepayment plans contrive to avoid through more compulsory measures.

Another type of private third-party arrangement is the doctors' own plan, Blue Shield. Organized medicine adopted Blue Shield as its voluntary solution to the threat of public health insurance. Under enabling legislation in Iowa as well as in most other states, Blue Shield must necessarily be controlled by doctors, and it is the only organization that is authorized to purvey medical *service,* as distinguished from medical *indemnities.* It provides prepayment for medical services and also preserves the free-choice-of-physician concept. About 90 per cent of Iowa physicians are "participating physicians," which means that they have agreed to accept the maximum fees established by Blue Shield as payment in full for services rendered to subscribers with incomes less than stated maximums. Payments are made by Blue Shield direct to the participating physicians. If a patient's income exceeds the limit specified in his policy, the physician is free to make his customary charge and to look to the patient for payment of the difference between it and the Blue Shield allowance. When the patient seeks service from a doctor of medicine who is not a "participating physician," Blue Shield will make payment, but on an indemnity basis. That is, the payment will be made to the patient-subscriber, rather than to the physician, and the doctor must look to the patient for payment of his bill.

Blue Shield is obviously an active third party in the doctor-patient relationship, for it establishes fee schedules, reviews charges made by physicians and makes direct payments to participating physicians. However, it represents the acceptance by the medical profession of a "benign" third party—an organization controlled by doctors themselves—as a bulwark against other third-party arrangements that would be less benign.

It must necessarily adopt policies which will gain the support of a majority of physicians. In Iowa, steps have recently been taken to assure this result. In Wisconsin, on the other hand, serious dissension has resulted from the existence of two competing Blue Shield plans, one of which is willing and the other unwilling to cooperate with Blue Cross, the hospitalization plan that is controlled by the hospitals.

In Iowa, it is recognized that full-service contracts are saleable to large numbers of individuals and families in the moderate-sized income groups, and a $5,400-maximum contract is now being marketed, under which the allowances to physicians for various services are higher than they have been under the old $3,600-limit contract. Yet Iowa physicians have been reluctant to yield their prerogative of determining their own fees, even in cases where their fees would be lower than the maximum allowed by Blue Shield. Accordingly, Blue Shield has experimented—with very limited success—with a "Blue Chip Plan" under which full service is provided to the subscriber and the participating physician is paid his regular fee rather than a standardized allowance. The fact that Blue Shield offered this "Blue Chip Plan" shows that Blue Shield wants to be a welcome third party.

Consumer or lay-sponsored prepayment plans make up the fourth category of private third-party medical plans. These include such third parties as the Group Health Association of Washington, D. C., the Health Insurance Plan of Greater New York and the Kaiser-Permanente Plans on the West Coast. Under these plans, the subscriber pays a monthly premium for complete medical and hospital care. However, he does not have an unrestricted choice of physician, but must choose from those who have been retained and employed by the group. Accordingly, these plans are commonly referred to as "closed panels." The physician is usually employed on a salary by the group, and caring for the patients of the group is his full-time job.

The closed panel plan eliminates free choice of physician and introduces a third party right into the middle of the doctor-patient relationship. In communities where there is sufficient competition in the form of private practitioners and voluntary hospitals, the closed panel will remain under pressure to provide favorable working conditions for the doctors whom it employs, and to provide the highest type of medical care and hospitalization for the subscribers whom it serves. But in New York City, where the Health Insurance Plan covers approximately 8,000,000 of the nearly 12,000,000 persons who live in the area, this competitive pressure is minimal, and the third party has an opportunity to be more autocratic.

A fifth category of private third-party medical plans are the non-insurance medical care arrangements. Of these, the ones sponsored by labor unions are currently causing most concern to organized medicine. There are now more than 4,000 union welfare funds covering at least 2,000,000 employees. These funds receive approximately $1,500,000,000 a year for health and welfare purposes. The sum represents about half of the total gross income of the physicians of the United States.

Although the larger part of these union moneys go into prepayment plans, including Blue Cross and Blue Shield, there is a developing tendency for unions to construct their own health centers. Perhaps the largest union fund being used directly for the provision of health care is that of the United Mine Workers, which was described by the attorney for the Medical Society of the State of Pennsylvania in the following terms:

> "A charitable trust . . . under which the Trustees have wide discretion to grant, limit or deny benefits almost as they see fit, and to provide therefor in any manner they choose. They could provide benefits only in their own hospitals, or solely by physicians on the payrolls, or by using any or all of the physicians practicing privately in a given locality, all of which they have done in various places. This was and is a frightening thing to doctors and miners alike, particularly in communities where miners constitute 90 per cent or more of the population. In such a community, the UMWA area medical administrator could quickly and effectively cause the economic ruin of a doctor who would not bend completely to his will, either in the matter of charges, type of treatment, number of patients treated or other matters."

The Fund got off to a good start, permitting free choice of physicians and paying fees customary in the areas where the services were rendered. However, the Fund has established its own hospitals in some states, has published lists of participating physicians, has refused to pay certain hospitals for Fund beneficiaries, has attempted to make special fee arrangements with certain physicians, has preferred certain physicans over others and has endeavored to pressure hospitals into the admission of selected physicians to hospital staffs, according to spokesmen for the medical profession. On the other hand, spokesmen for the Fund have stated that some physicians were grossly overcharging the Fund, were performing unnecessary services, and were performing services for which they clearly were not qualified, and that certain hospitals were overcharging the Fund or were guilty of practices inimical to the best interests of the Fund's beneficiaries.

As a result of these disputes, legislative action has been unsuccessfully sought in some states, and litigation is pending as well. Conferences have been and are being held between representatives of medicine and labor in the hope of arriving at a

solution to the problems caused by third-party union medical care plans. At one such conference, the former chairman of the Committee on Medical Economics of the Medical Society of the State of Pennsylvania, recalling the start of the Mine Workers Union health and welfare program in 1946, said:

> "Medicine, with its heritage of idealism, and labor with its cold, calculated realism met on unfamiliar grounds with an inherited mutual malignant distrust. Obviously, no rules of conduct had been agreed upon before this conflict began, and we both—labor and medicine —erected our first milestones of stupidity. In retrospect, one must wonder if there had been a conference held in an atmosphere of respect and attempted understanding, whether mutual agreement on conduct could have been reached, and this present intolerable situation could have been avoided."

Another third party that has asserted its right to participate directly in the doctor-patient relationship is the hospital. Hospitals are usually operated by boards of trustees composed of public-spirited citizens serving without compensation. Actual administration of each hospital is entrusted to a paid hospital administrator. The doctors who use the facilities of the hospital are authorized to do so by virtue of membership on the medical staff, which is formally organized and has officers, committees, etc.

A rather extraordinary relationship has developed between the hospital trustees and the medical staff, primarily as a result of custom and tradition. Although the trustees usually have the legal power to determine which doctor shall be admitted to or excluded from the staff, the trustees have traditionally followed the recommendations of the medical staff in these matters. Also, the trustees have customarily adopted the position that their function is to provide hospital services of the highest order, but that all matters pertaining to the practice of medicine are to be the responsibility of the medical staff.

Since World War II, however, the type of hospital administrator willing to have the trustees yield full medical prerogatives to the medical staff has been replaced by a type of specially trained administrator who is imbued with the concept that the hospital "should be the health center of the community." This theory, if carried to its logical extreme, means the complete domination of physicians by hospitals, so that the controlling party in the healing team will be the hospital, rather than the physician.

The resultant conflict produced its first tensions in the laboratory and x-ray departments, where disputes developed all over the country as to whether the services rendered by radiologists and pathologists were hospital services or medical services. The hospitals asserted that they were hospital services, and that even if they were considered medical services, the hospital should be entitled to furnish and to control them. Hospital spokesmen asserted that any other interpretation would reduce the hospital to the status of a mere "hotel for sick people."

The disagreement came to a head in Iowa, where litigation resulted. The trial court sustained the physicians' position that pathology and radiology constitute the practice of medicine and that the rule prohibiting corporations from practicing medicine applies to non-profit hospitals, regardless of their good intentions. In arriving at its decision, the trial court quoted from an Illinois case and an Iowa case as follows:

> "To practice a profession requires something more than the financial ability to hire competent persons to do the actual work. It can be done only by a duly qualified human being, and to qualify, something more than mere knowledge or skill is essential. . . . No corporation can qualify.
>
> "It [a corporation] can have neither honesty nor conscience, and its loyalty must, in the very nature of its being, be yielded to its managing officers, its directors and its stockholders. Its employees must owe their first allegiance to their corporate employer, and cannot give the patient anything better than a secondary or divided loyalty.
>
> "There are certain fields of occupation which are universally recognized as 'learned professions.' Proficiency in these occupations requires long years of special study and of special research and training and of learning in the broad field of general education. Without such preparation, proficiency in these professions is impossible. The law recognizes them as a part of the public weal, and protects them against debasement, and encourages the maintenance therein of high standards of education, of ethics and of ideals. It is for this purpose that rigid examinations are required and conducted as preliminary to the granting of a license. The statutes could be completely avoided and rendered nugatory if one or more persons who failed to have the requisite learning to pass the examination might, nevertheless, incorporate themselves formally into a corporation, in whose name they could practice lawfully the profession which was forbidden to them as individuals. A corporation, as such, has neither education nor skill nor ethics. These are *sine qua non* to a learned profession."

The parties to the Iowa litigation arrived at a compromise agreement which was subsequently enacted into law. This law expressly provides that radiology and pathology services performed in hospitals are medical services which must be billed and paid for as such. It provides that hospitals

will not interfere with the medical acts and decisions of the physicians. At the same time, the law does recognize the standing of the hospital as a "third party" by authorizing it to maintain facilities for the services and by giving it an equal voice in the employment of technicians and in the establishment of fees.

There is reason to hope that in Iowa, at least, the conflict has been resolved in a way that will preserve for medicine its dominant position in the doctor-patient relationship, but which recognizes the hospital as a benign third party, and that this relationship can be happily maintained so as to permit both medical and hospital services to realize their fullest possible potentials for the benefit of the most important person, the patient.

It is discouraging to note, however, that the American Hospital Association has produced and published a legal brief which argues that the corporate practice rule is an acceptable principle as applied to *profit-making* corporations, quacks and charlatans, but that it should not be applicable as a means of preventing *non-profit hospitals* from practicing medicine. The underlying argument is that hospitals should dominate the entire health field, of which the practice of medicine is only a part, and that as hospitals are public-spirited institutions, they can better be trusted with the over-all health care of the patient than can the practicing physician. This concept, which strikes at the essence of the "Three's a Crowd" principle, will be certain to encounter active resistance, should it be pressed by the American Hospital Association.

A final type of third party, which has been appearing in greater and greater numbers, is made up of the charitable health funds or foundations. Examples are the familiar heart, cancer, TB and polio funds. The interest of private citizens in specific diseases or ailments has served a commendable purpose, and to date there has been no serious danger that any of these funds would play other than the role of a benign third party in the medical picture. Yet, they are nonetheless third parties, and medicine is doing its best to keep them benign by cooperating fully with their programs.

THE THIRD PARTY IS HERE TO STAY

Thus far, I have depicted the role of the federal government as a third party in employing physicians, in proposing compulsory national health insurance, in expanding and threatening further to expand the Social Security Act, and in developing the Medicare program. I have discussed the role of the state government as a third party in connection with mental health institutions, with the private practice of medicine by faculty members at the college of medicine of the state university, and with the present and prospective Vendor Payment Program and Near-Needy Program. The roles of private third parties also have been considered—in industrial medicine, in commercial health insurance, in Blue Shield, in closed-panel plans, in union-sponsored health plans, in medical services provided in hospitals, and in projects financed by the national funds or foundations.

This panoramic view must be sufficient for my concluding that the third party is here to stay. I do not mean that doctors should speedily embrace the third-party concept, but only that they must be discriminating about it and should deal with realities.

Thus far, it has been assumed that *third parties must be either benign or malignant according to the degree of control they attempt to exercise over the medical profession.* This assumption has stemmed from the premise that doctors should play the dominant role in all aspects of health care. Now, let's throw the spotlight upon that premise. If the medical profession should fail to retain popular support, its entire future would be radically changed. To physicians, this premise is so self-evident as to require no explanation or defence, and it seems preposterous to them that it is now directly or indirectly being subjected to challenge. By the same token, it is difficult for physicians to set forth their reasons for maintaining the pre-eminence of the medical profession. In the first place any attempt on their part to do so would smack of advertising, boasting or soliciting patients —all of which they have been schooled to regard as unbecoming. In the second place, in undertaking this task, the doctor feels quite as he might if he were suddenly asked to explain why he loves his wife or why he is a loyal citizen of the United States.

Nevertheless, the time is at hand when medicine must first analyze and then enunciate its reasons for maintaining the physician's right to the captaincy of the health team.

THE THIRD PARTY AND THE DISTRIBUTION OF MEDICAL SERVICES

If physicians are to continue exercising leadership in the health field, they must demonstrate that their leadership will result in (1) the best possible medical care, and (2) the best possible distribution of that care. This dichotomy is well understood by most third parties. A well-known spokesman for group health plans has written:

> "A sharp distinction exists between the art and the economics of medicine. The art and practice of the science is and should always remain in the hands of the trained and licensed practitioners. On the other hand, those who pay the cost should be free to make arrangements with doctors on a *mutually agreeable basis* for prepayment of the cost."

In the same article, this spokesman has made it clear that his notion of a "mutually agreeable

basis" must be some type of fixed annual income. He states:

> "Control by laymen of the means of paying the costs of medical care carries with it the means of arranging with the participating doctors a negotiated method of compensation, for example salary, capitation or guaranteed income, which—unlike fee-for-service—produces a predictable annual cost, an important consideration for administrators of these health funds."

It seems preposterous, in view of the evidence, to assert that medical leadership has failed to provide a high quality of medical care. There is more justification for the criticism that medical leadership has not provided adequate distribution of the high-quality care that is available. People have come to feel that they have an inalienable right to the best medical care. Medical leaders should welcome this demand and should do an ever more aggressive job of devising methods for meeting it within the traditional framework of medicine. On the other hand, a patient who has to choose between no medical care at all and a second-rate medical care purveyed by a third-party health care plan will hasten to accept the best he can get, regardless of the fundamental loss of freedom that may be involved.

In discussing the distribution of medical services, I am talking about the economics of medicine. I am also talking about the large sums of money collected by prepayment plans, and also by governmental agencies and union welfare plans, all of which are in the market place bidding for the doctor's services. In vew of this situation, it is no wonder that the custodians of these funds are tempted to look for a way of buying these services at wholesale rather than at retail rates. The temptation before the controllers of these funds is to employ doctors on salaries, for to do so would be cheaper. There is no doubt that if all doctors were placed on salaries, the total of their incomes would be less than the total earnings they now derive from their private practices. This might not be true at the very beginning, but it would eventually be true.

The ordinary consumer, however, knows that the cheapest commodity or service is by no means always the "best buy." This, of course, is the crucial issue, and it will be discussed in connection with a consideration of the quality of medical care.

In considering the cost of medical care, one should deal with facts, not myths. America's total bill for all types of medical care comes to approximately $12,000,000,000, of which doctors receive one-fourth, or approximately $3,000,000,000. This is about $1,000,000,000 less than Americans pay out annually to automobile mechanics, repair men, etc. for maintaining their vehicles. The cost of living has doubled since 1936. Physicians' fees have increased less than the cost of living, for at present they are about 78 per cent above the 1936 level. Hospital costs, on the other hand, have almost quadrupled since 1936. The average family has a medical bill totaling about $278.00, each year, of which $99.00 goes to physicians. The average doctor has a net income before taxes of approximately $15,000 per year. Considering his average work week of 60-62 hours, with no time and a half for calls made at night or after he has put in his basic 40 hours, his average hourly pay is currently $4.87 per hour.

The American public is entitled to know how much of the $3,000,000,000 paid to doctors annually will be saved if the third-party plans become dominant. The public is also entitled to know whether the savings would be worth the cost in deterioration of the medical care rendered. The public is also entitled to know what the cost of administering these plans would be.

Medicine, in turn, must realize that there is price competition for medical services. It must realize that prepayment and funded plans eliminate collection losses and provide payment for patients who formerly wouldn't or couldn't pay their bills.

The root of medicine's problem in discussing medical economics is the fact that not enough people truly understand the concept of *professionalism*, or if they do understand it, they are cynical about it. Any professional man knows that a profession is not primarily a money-getting occupation, but that the first concern of a professional man must be to place the welfare of his patient or client ahead of his own. For example, the Iowa Code provides that "it is the duty of an attorney and counselor never to reject for any consideration personal to himself the cause of the defenseless or oppressed." Similarly, the principles of medical ethics of the American Medical Association provide:

> "The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration. Whoever chooses this profession assumes the obligation to conduct himself in accord with its ideals. . . . The avowed objective of the profession of medicine is the common good of mankind. Physicians faithful to the ancient tenets of this profession are ever cognizant of the fact that they are trustees of medical knowledge and skill and that they must dispense the benefits of their special attainments in medicine to all who need them."

It is only because of these principles that medicine can claim any right to assert leadership with respect to the cost, as well as the quality, of medical care. The challenge to medicine at this point is a wholesome one. If, in fact, the profession fails

to act in accordance with these fundamental principles, it will deservedly forfeit its right to leadership in the economic field.

Those who are close to medicine are not concerned that it will depart from those ethical standards. The real danger they see is that the public may be led erroneously to believe that medicine cannot be trusted to charge fairly for services.

Medicine is under constant attack and vilification by spokesmen for third parties who deride medical ethics and reduce the entire set of objectives of the medical profession to a scheme for the preservation of financial gains. One wonders whether a statement such as the following could come from anyone other than a person who, himself, is so mean of spirit that he can conceive of nothing but dishonesty and greed in anyone else:

> "Organized medicine's concern is not with rights of citizenship, the quality of care, the patient-physician relationship, or with ethics. It is concerned with the economics of medicine. The free-choice principle would guarantee the perpetuation of the *status quo* of fee-for-service solo practice, and would place medical societies in absolute control not only of the quality of medical care, but of the cost as well. Private practitioners are in the enviable position of selling services to those who are unable to judge their quality. Organized medicine resents the interference of a third party because they wish to preserve this immunity from professional scrutiny of their work."

These remarks were made by an area medical administrator of the United Mine Workers of America.

The doctors of Iowa, as well as those of most other states, have already adopted a relative value unit fee index which permits organized medicine to agree upon maximum fee schedules with various third parties, and the doctors have taken this action voluntarily. Medicine also has set up fee review and grievance committees to assure compliance with the undertakings it makes with respect to such schedules. Each doctor who participates in a program that makes use of a schedule of this sort recognizes that he has given up some of his professional freedom in that he has voluntarily limited his right to determine his charges. *By the same token, if this is the price of preserving his other professional freedoms and the leadership of professional medicine, he will do this without too much hesitation.*

Certainly there are shortcomings in our present system of medical economics, and there are abuses that even now are calling for corrective measures. Medicine is quite aware of the overutilization of hospitalization insurance, which is largely attributable to the desire patients have to "get their money's worth out of their insurance" by going to the hospital when they can. The blame, however, must rest primarily on the doctors' shoulders, for physicians are the ones who admit patients to hospitals. Doctors, acting alone, are embarrassed about resisting such pressure from patients, partly out of the fear that the patient will find another doctor who will be more liberal as to hospital admissions. It has already been proposed that hospital medical staffs should create admissions committees for the uniform application of an admissions policy formulated by the doctors themselves.

It is also true that patients sometimes have duplicate health insurance coverages, so that in fact they make money by being ill. This problem can best be met by the prepayment plans and insurance carriers themselves, but the doctors can well afford to participate in the devising of a means of preventing financial gain to the patient as a result of illness.

It is true, furthermore, that there are occasional reports of dishonest and unethical actions by physicians which in effect defraud either third parties or patients. Whenever these cases have come to the attention of the Grievance Committee of the Iowa State Medical Society, the offending physician has been dealt with promptly and firmly. In all likelihood, greater publicity should be given to the existence of this Grievance Committee, in order that third parties or others with real or fancied grievances can have their cases considered. Thus, a penalty could be promptly imposed if one is warranted, or the matter could be explained to the complainant if the Committee has found no fault with the doctor.

In short, I am saying that the medical profession has the desire and the ability to prevent abuse and to keep its house in order. Skeptics may well look at the record to date. The present high standards of medical education were achieved, not by compulsion from the outside, but by the voluntary action of organized medicine in establishing accreditation agencies. The creation of specialty boards to put a premium on the improving of medical skills, again, was a voluntary action of organized medicine. Postgraduate medical education, which is made available in a constant flood and which every physician regards as essential to the maintenance and improvement of his skill in caring for his patients, is voluntarily supported at considerable out-of-pocket expense by the doctors themselves.

The relationship between the medical staff and the trustees of each hospital is voluntary and essentially based on a tradition of mutual trust and respect. In private hospitals, likewise, the medical staff and the trustees have almost unrestricted rights as regards admitting, refusing admission to or removing doctors from the staff. These broad

powers open up a wide field of possible abuse, for individual doctors or factions of doctors, motivated by personal jealousies or other selfish considerations, could easily deny to other doctors the right to use a hospital. Surprisingly enough, however, the record is almost free from abuses of this type mostly because of the strong spirit of professionalism that surrounds physicians, causing them to put the interests of the medical profession ahead of their own selfish interests.

Likewise, the improved standards and conditions in hospitals today are the result of voluntary action—the work of an accreditation committee created jointly by doctors and hospitals. Again, the members of the Iowa State Medical Society have voluntarily set up, and during five recent years have assessed themselves $10 each per year to accumulate over $125,000 to capitalize a student loan fund with which to assist medical school students who might otherwise be unable to complete their training and thus would never succeed in becoming physicians. Organized medicine supported legislation in the Iowa General Assembly to make it possible for qualified foreign-trained physicians to be licensed in Iowa. It also supported legislation which has given the Board of Medical Examiners the power to revoke or suspend medical licenses, after appropriate hearings. The Iowa State Medical Society has more than 40 committees composed of physicians who volunteer their time and efforts to further the public welfare. These committees, nearly all of them surprisingly active, concern themselves with the problems of automotive safety, blood banking, chronic illness, emergency medical service, health education, industrial health, maternal and child health, medical education and hospitals, medical service to the indigent, mental health, nursing education and service, patient care, rehabilitation, rural health and veterans' affairs.

On its own initiative, the Iowa State Medical Society has conducted an objective survey to determine to what extent there is now, or will be in the immediate future, a shortage of physicians to meet the health needs of the state. One of the welcome revelations of that survey has been the finding of a relative preponderance of physicians in their 40's and early 50's. On that basis, we can be sure that the rate of retirement will be relatively low throughout the next 15-20 years. To the extent that the study shows a need for securing additional physicians, I am certain the requisite effort will be made, for the medical profession knows that it can maintain its position of leadership only insofar as that leadership is successful in providing excellent medical care.

Were these facts more generally known, the public would have even greater confidence in the ability of medicine voluntarily to live up to the responsibilities it has assumed and is seeking to retain.

THIRD PARTIES AND THE QUALITY OF MEDICAL SERVICES

Proponents of the more radical third-party plans boast, at times, of the superior quality of medical care furnished by their arrangements, while at the same time complaining that they have difficulty in obtaining physicians, because doctors who become identified with plans like theirs are not admitted to membership in medical societies. These proponents invariably attribute this ostracism to the mercenary motives of the private practitioners who make up the majorities in the medical societies.

The fact is that such ostracism exists and will continue to exist as long as there is free medicine on the one hand and malignant types of third-party plans on the other. The reason is primarily professional rather than economic. Physicians know that a doctor who has identified himself with a third-party plan that dominates not only the economics but also the art of medicine has betrayed his profession. As long as a majority of physicians feel this way, the malignant type of third-party plan will be unable to obtain a staff of high-quality physicians and will be unable to produce the quality of medical care to which it aspires. Moreover, even if this type of third-party plan were able to "break down the barriers" and employ all of the physicians in the country, the quality of medical care would continue to suffer. This would occur, not because the doctors would lose their skill, but because they would have lost the professional spirit which makes medicine an art rather than a business!

It is difficult for laymen to comprehend the spirit of professionalism. It has to be lived and breathed to be fully understood. As far as medicine is concerned, it is best stated in the canons of ethics. As already noted, the first principle is that the interests of the patient come first—"The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man." Doctors are pledged to improve and to share their knowledge and skill. They are to practice a method of healing founded on a scientific basis. They are to safeguard the public and themselves against physicians deficient in moral character or professional competence.

The principle of "free choice of physician" is recognized. This concept requires some elaboration. *It is important to the doctor,* for it enables him to choose those whom he will serve and to be beholden to none other than those whom he has chosen. At the same time, *the principle is important to the patient.* Patients often feel that medicine has become so impersonal and specialized that free choice of physician no longer has any meaning for them. In these instances, however, they are thinking primarily of the more routine procedures where rapport between patient and physician is

less important. Doctors know that healing has its spiritual aspects, and if there aren't full confidence and understanding between doctor and patient, healing may be retarded or even prevented. Patients know that if for any reason they are dissatisfied with their physician, they have the right to go elsewhere to find another doctor who will meet their needs.

The canons of ethics also preclude advertising and the solicitation of patients. They impose on a physician the requirement of remaining free to exercise his judgment and skill. They require him to charge fair fees "commensurate with the services rendered and the patient's ability to pay." He is prohibited from splitting fees, and is required to limit the source of his professional income to the medical services he himself has actually rendered. He is required to seek consultation under appropriate circumstances. He is required to maintain professional secrets and to assume his share of responsibility to society in general.

These principles have withstood the test of time. They can and undoubtedly will be changed at such times as experience and wisdom indicate that a change is required. They will not be changed, however, at the instigation of those who deride them and impugn the motives of those who follow them in good faith!

What does the professional spirit do for physicians? At times we are apt to lose sight of the fact that physicians are only human beings who happen to have chosen the practice of medicine for a career, rather than some other calling. If, as a group, they develop traits and qualities that set them apart from other men, it is because of their professional training and experience. The private practice of medicine as we know it today tends to develop the fullest potential that the physician possesses. If he is true to his profession, he will be a man of skill, integrity and self-reliance, imbued with a spirit of service to his patients and pride in his profession.

Medicine has been successful in attracting to its ranks the cream of our college students. Today, these students have opportunities for other careers that require fewer years of preparation, and promise more immediate compensation, greater security and shorter working hours. Those who still are attracted to the medical profession must be motivated not only by an interest in the type of work, but by the prestige, independence and opportunities for service that it affords, as well as by its financial attractiveness.

Doctors sincerely believe that the domination of medicine by third parties would result in an erosion and a downgrading of the profession that would inevitably result in a poor quality of medical care. This would not be noticeable in the beginning, for the momentum produced by the spirit of the present practitioners would continue for a time, even under adverse conditions. However, as new physicians were trained, they would be of a different temperament from the physicians we have known in the past. Unless new incentives were quickly provided to replace those lost as a result of third-party domination, it is hard to visualize the new type of physician as anything more than a competent technician.

Critics of organized medicine frequently refer to the AMA as the "strongest union in the world." Doctors, of course, resent this, for the union label connotes an emphasis on trade or business that is inconsistent with the spirit of professionalism. Although often tempted, doctors have been unwilling to abandon the spirit of professionalism in order to engage in a full and fair fight in the marketplace. However, one can readily predict that if third parties were successful in stripping medicine of its professionalism, it would have nothing to lose and would make a show of "solidarity" that would reach a new high for the labor movement to date.

WHEN IS THREE NOT A CROWD?

It has already been recognized that three is *not* a crowd when the third party does not exercise an unreasonable control over the practice of medicine. This is necessarily a general concept which ordinarily must be applied in the light of the facts of each particular case. The Ohio State Medical Association has considered the third-party problem and has outlined five specific tests by means of which one can identify an improper plan. That group of doctors maintains that:

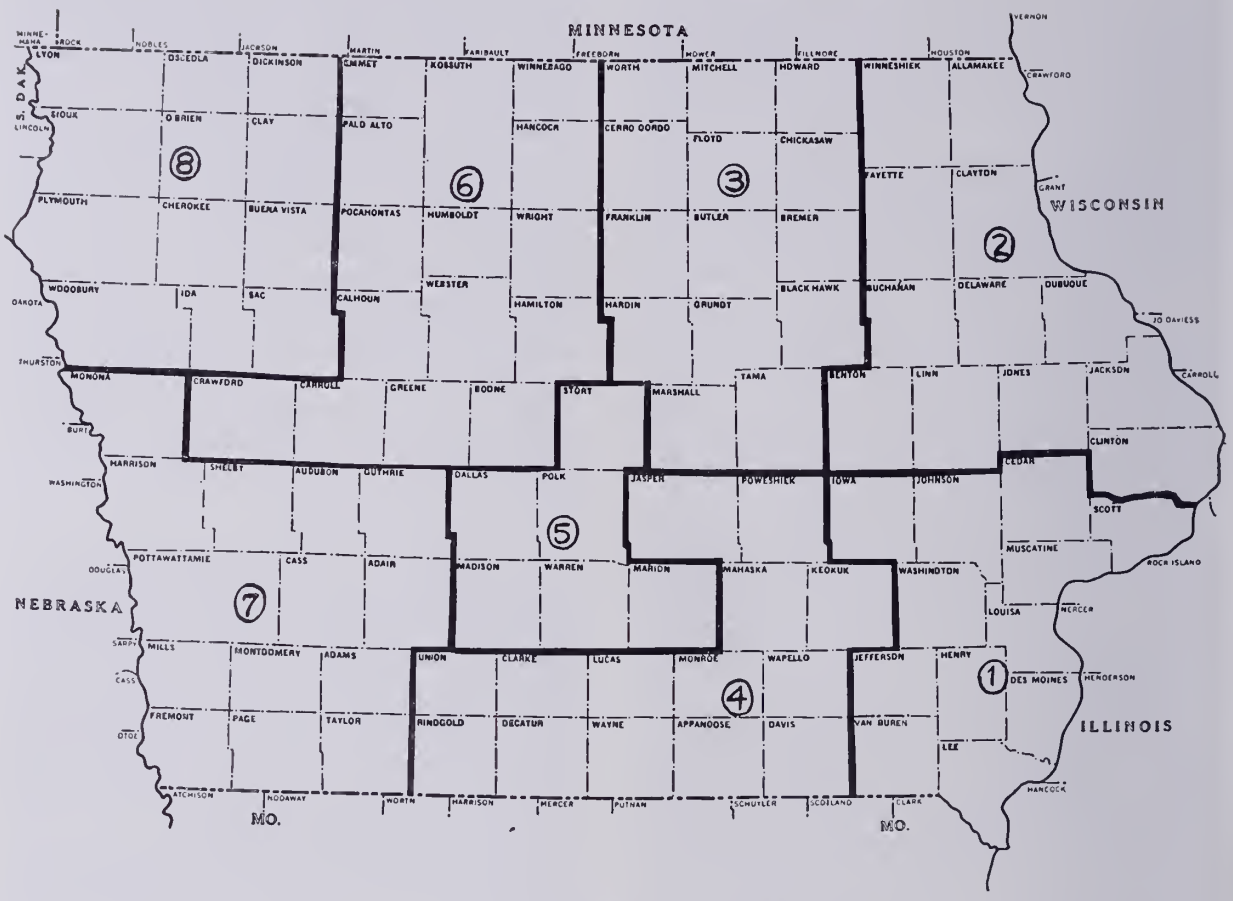
"Any third-party medical care plan is to be condemned if it involves the sale or disposal of a physician's services under terms or conditions which

1. Permit exploitation of his services for the financial profit of the third party
2. Tend to interfere with or impair the free and complete exercise of his judgment and skill
3. Tend to cause a deterioration of the quality of medical care in the community
4. Involve solicitation of patients by the physician, directly or indirectly, or involve his consent to, or acquiescence in, solicitation of patients by others for or on behalf of the physician
5. Deny to the members of the community in which the physician practices a reasonable degree of free choice of physician or physicians."

Perhaps an even better test for determining when three is *not* a crowd was that provided by the Great Physician when he said:

> "For where two or three are gathered together in my name, there am I in the midst of them."

Iowa Delegation in Congress



U. S. CONGRESSMEN FROM IOWA

First Congressional District—Fred Schwengel (R), Davenport (Scott)
Second Congressional District—James E. Bromwell (R), Cedar Rapids (Linn)
Third Congressional District—H. R. Gross (R), Waterloo (Black Hawk)
Fourth Congressional District—John Kyl (R), Bloomfield (Davis)
Fifth Congressional District—Neal E. Smith (D), R.F.D., Altoona (Polk)
Sixth Congressional District—Merwin Coad (D), Boone (Boone)
Seventh Congressional District—Ben F. Jensen (R), Exira (Audubon)
Eighth Congressional District—Charles B. Hoeven (R), Alton (Sioux)

U. S. SENATORS FROM IOWA

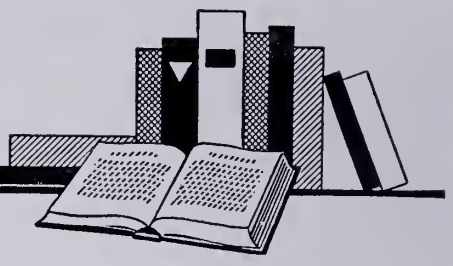
Bourke B. Hickenlooper (R)	Cedar Rapids
Jack Miller (R)	Sioux City

Letters to congressmen should be addressed to the House Office Building, Washington 25, D. C., and letters to senators should be addressed to the Senate Office Building, Washington 25, D. C.

1961 IOWA LEGISLATURE

County	*Senatorial District*	*Senator*	*Representative*
Adair	16 (with Madison)	Joseph B. Flatt (R) Winterset	Eugene Halling (R) Orient
Adams	6 (with Taylor)	Orval C. Walter (D) Lenox	James E. Briles (R) Corning
Allamakee	40 (Fayette)	George L. Scott (R) West Union	Walter R. Hagan (R) Waterville
Appanoose	3 (with Davis)	Joe N. Wilson (R) Unionville	Delmont Moffitt (R) Mystic
Audubon	17 (with Guthrie, Dallas)	Harry L. Cowden (R) Guthrie Center	Carl H. Hensley (D) Exira
Benton	45 (with Grundy, Tama)	Lawrence Putney (R) Gladbrook	David E. Weichman (R) Newhall
Black Hawk	38	Melvin H. Wolf (D) Waterloo	Chester O. Hougen (R) Cedar Falls
			Francis L. Messerly (R) Janesville
Boone	31 (with Story)	Clifford Nystrom (R) Boone	Ray Eveland (D) Kelley
Bremer	39 (with Butler, Franklin)	J. Kendall Lynes (R) Plainfield	William S. Lynes (R) Waverly
Buchanan	33 (with Delaware)	Irving D. Long (R) Manchester	Kenneth L. Parker (R) Lamont
Buena Vista	50 (with Humboldt, Pocahontas)	Guy G. Butler (R) Rolfe	Fred M. Jarvis (R) Alta
Butler	39 (with Bremer, Franklin)	J. Kendall Lynes (R) Plainfield	Chas. E. Grassley (R) New Hartford
Calhoun	27 (with Webster)	C. Joseph Coleman (D) Clare	Dewey Summa (D) Rockwell City
Carroll	48 (with Greene, Sac)	Peter F. Hansen (D) Manning	John A. Baumhover (D) Carroll
Cass	18 (with Shelby)	John D. Shoeman (R) Atlantic	Lester L. Kluever (R) Atlantic
Cedar	23 (with Jackson, Jones)	Earl Elijah (R) Clarence	A. L. Mensing (R) Lowden
Cerro Gordo	43 (with Hancock)	Leigh R. Curran (R) Mason City	Marion E. Olson (R) Mason City
Cherokee	46 (with Ida, Plymouth)	J. Henry Lucken (R) Akron	George P. Rapson (R) Cherokee
Chickasaw	44 (with Floyd)	Robert R. Rigler (R) New Hampton	Robert A. McCracken (R) New Hampton
Clarke	11 (with Warren)	J. Louis Fisher (R) Osceola	Cecil V. Lutz (R) Osceola
Clay	47 (with Dickinson, O'Brien)	LeRoy Getting (R) Sanborn	Merle W. Hagedorn (D) Royal
Clayton	36	Adolph Elvers (D) Elkader	K. W. Fuelling (D) Farmersburg
Clinton	22	David O. Shaff (R) Clinton	John Camp (R) Bryant
			Lawrence D. Carstensen (R) Clinton
Crawford	34 (with Harrison, Monona)	R. G. Moore (D) Dunlap	Everett Crane (R) Vail
Dallas	17 (with Audubon, Guthrie)	Harry L. Cowden (R) Guthrie Center	Leroy H. Petersen (R) Grimes
Davis	3 (with Appanoose)	Joe N. Wilson (R) Unionville	Dewey E. Goode (R) Bloomfield
Decatur	5 (with Ringgold, Union)	X. T. Prentis (R) Mount Ayr	Franklin S. Main (D) Lamoni
Delaware	33 (with Buchanan)	Irving D. Long (R) Manchester	James E. Patton (R) Manchester
Des Moines	9	Carl Hoscheck (D) Burlington	Robert R. Dodds (D) Danville
Dickinson	47 (with Clay, O'Brien)	LeRoy Getting (R) Sanborn	Roy J. Smith (R) Spirit Lake
Dubuque	35	Andrew G. Frommelt (D) Dubuque	John L. Duffy (D) Dubuque
			Thomas P. O'Toole (D) Dubuque
Emmet	49 (with Kossuth, Palo Alto)	John J. Brown (D) Emmetsburg	Niels J. Nielsen (D) Ringsted
Fayette	40 (with Allamakee)	George L. Scott (R) West Union	Maurice E. Baringer (R) Oelwein
Floyd	44 (with Chickasaw)	Robert R. Rigler (R) New Hampton	E. W. Shaw (R) Charles City
Franklin	39 (with Bremer, Butler)	J. Kendall Lynes (R) Plainfield	Floyd P. Edgington (R) Sheffield
Fremont	7 (with Page)	Frank M. Hoxie (R) Shenandoah	Paul E. McElroy (R) Percival
Greene	48 (with Carroll, Sac)	Peter F. Hansen (D) Manning	C. Raymond Fisher (R) Grand Junction
Grundy	45 (with Tama, Benton)	Lawrence Putney (R) Gladbrook	Harold O. Fisher (R) Wellsburg
Guthrie	17 (with Audubon, Dallas)	Harry L. Cowden (R) Guthrie Center	Samuel E. Robinson (R) Guthrie Ctr.
Hamilton	37 (with Hardin, Wright)	John A. Walker (R) Williams	Robert W. Naden (R) Webster City
Hancock	43 (with Cerro Gordo)	Leigh R. Curran (R) Mason City	Lenabelle Bock (R) Garner
Hardin	37 (with Hamilton, Wright)	John A. Walker (R) Williams	Paul M. Walter (R) Union
Harrison	34 (with Crawford, Minona)	R. G. Moore (D) Dunlap	W. E. Darrington (R) Persia
Henry	10 (with Washington)	Clifford M. Vance (R) Mt. Pleasant	John B. Rockwell (R) Mt. Pleasant
Howard	42 (with Winneshiek)	Lynn Potter (D) Cresco	Ross Stevenson (D) Lime Springs
Humboldt	50 (with Buena Vista, Pocahontas)	Guy G. Butler (R) Rolfe	Percie Van Alstine (R) Gilmore City
Ida	46 (with Cherokee, Plymouth)	J. Henry Lucken (R) Akron	J. W. Graham (R) Ida Grove
Iowa	25 (with Johnson)	D. C. Nolan (R) Iowa City	Wm. J. Coffman (R) North English
Jackson	23 (with Cedar, Jones)	Earl Elijah (R) Clarence	Howard Tabor (D) Baldwin
Jasper	29	Eugene M. Hill (D) Newton	Max W. Kreager (R) Newton
Jefferson	2 (with Van Buren)	Dewey B. Phelps (R) Hillsboro	LeRoy Chalupa (R) Pleasant Plain
Johnson	25 (with Iowa County)	Carl J. Goetz (D) Iowa City	Scott Swisher (D) Iowa City
Jones	23 (with Cedar, Jackson)	Earl Elijah (R) Clarence	Russell L. Eldred (R) Anamosa
Keokuk	12 (with Poweshiek)	C. Edwin Gilmour (D) Grinnell	Keith H. Dunton (D) Thornburg
Kossuth	49 (with Emmet, Palo Alto)	John J. Brown (D) Emmetsburg	Casey Loss (D) Algona
Lee	1	Charles F. Eppers (D) Keokuk	W. S. Eichenlaub (R) Fort Madison
Linn	26	Martin Wiley (R) Cedar Rapids	J. W. Tom Riley (R) Cedar Rapids
			John M. Ely, Jr. (D) Cedar Rapids
Louisa	20 (with Muscatine)	George W. Weber (R) Columbus Junction	Fred E. Wier (R) Letts
Lucas	4 (with Wayne)	W. C. Stuart (R) Chariton	Neal Pierce (R) Russell
Lyon	24 (with Osceola, Sioux)	J. T. Dykhouse (R) Rock Rapids	A. C. Hanson (R) Inwood
Madison	16 (with Adair)	Joseph P. Flatt (R) Winterset	Alvin P. Meyer (D) Winterset
Mahaska	14	John Gray (R) Oskaloosa	Dan Prine (R) Oskaloosa
Marion	15 (with Monroe)	Carroll L. Price (R) Knoxville	Elmer H. Vermeer (R) Pella
Marshall	28	Howard C. Buck (R) Melbourne	John L. Mowry (R) Marshalltown
Mills	8 (with Montgomery)	Edward A. Wearin (R) Red Oak	William J. Scherle (R) Henderson
Mitchell	41 (with Worth, Winnebago)	Jacob Grimstead (R) Lake Mills	Fred B. Hanson (R) Osage
Monona	34 (with Crawford, Harrison)	R. G. Moore (D) Dunlap	Elroy Maule (D) Onawa
Monroe	15 (with Marion)	Carroll L. Price (R) Knoxville	Katherine M. Falvey (D) Albia
Montgomery	8 (with Mills)	Edward A. Wearin (R) Red Oak	Conrad Ossian (R) Stanton
Muscatine	20 (with Louisa)	George W. Weber (R) Columbus Junction	David M. Stanley (R) Muscatine
O'Brien	47 (with Clay, Dickinson)	LeRoy Getting (R) Sanborn	Marvin W. Smith (R) Paullina
Osceola	24 (with Lyon, Sioux)	J. T. Dykhouse (R) Rock Rapids	W. J. Johannes (D) Ashton
Page	7 (with Fremont)	Frank Hoxie (R) Shenandoah	Vern Lisle (R) Clarinda
Palo Alto	49 (with Emmet, Kossuth)	John J. Brown (D) Emmetsburg	John P. Kibbie (D) Emmetsburg
Plymouth	46 (with Cherokee, Ida)	J. Henry Lucken (R) Akron	Gordon Stokes (R) LeMars
Pocahontas	50 (with Buena Vista, Humboldt)	Guy G. Butler (R) Rolfe	Frances Hakes (R) Laurens
Polk	30	George E. O'Malley (D) Des Moines	Ray Hanrahan (D) Des Moines
			Wm. F. Denman (D) Des Moines
Pottawattamie	19	Richard C. Turner (R) Council Bluffs	Harry R. Gittins (R) Underwood
			Richard F. Stageman (R) Council Bluffs
Poweshiek	12 (with Keokuk)	C. Edwin Gilmour (D) Grinnell	George L. Paul (R) Brooklyn
Ringgold	5 (with Decatur, Union)	X. T. Prentis (R) Mount Ayr	Lester Sickels (R) Kellerton
Sac	48 (with Carroll, Greene)	Peter F. Hansen (D) Manning	Elmer F. Lange (R) Sac City
Scott	21	Jack Schroeder (R) Davenport	Riley Dietz (R) Walcott
			Paul W. Knowles (R) Davenport
Shelby	18 (with Cass)	John D. Shoeman (R) Atlantic	Peter Steenhusen (D) Irwin
Sioux	24 (with Lyon, Osceola)	J. T. Dykhouse (R) Rock Rapids	Elmer H. Den Herder (R) Sioux Center
Story	31 (with Boone)	Clifford Nystrom (R) Boone	Ray C. Cunningham (R) Ames
Tama	45 (with Grundy, Benton)	Lawrence Putney (R) Gladbrook	Shas. F. Balloun (R) Toledo
Taylor	6 (with Adams)	Orval C. Walter (D) Lenox	Ivan Wells (D) Bedford
Union	5 (with Decatur, Ringgold)	X. T. Prentis (R) Mt. Ayr	Joseph G. Knock (R) Creston
Van Buren	2 (with Jefferson)	Dewey B. Phelps (R) Hillsboro	H. E. Millen (R) Farmington
Wapello	13	Jake B. Mincks (D) Ottumwa	Harvey W. Ware (R) Ottumwa
			Cleve L. Carnahan (D) Ottumwa
Warren	11 (with Clarke)	J. Louis Fisher (R) Osceola	Carl Hirsch (R) Indianola
Washington	10 (with Henry)	Clifford M. Vance (R) Mt. Pleasant	Richard L. Stephens (R) Ainsworth
Wayne	4 (with Lucas)	W. C. Stuart (R) Chariton	Reed Casey (D) Corydon
Webster	27 (with Calhoun)	C. Joseph Coleman (D) Clare	Willard M. Freed (D) Gowrie
Winnebago	41 (with Mitchell, Worth)	Jacob Grimstead (R) Lake Mills	Henry C. Nelson (R) Forest City
Winneshiek	42 (with Howard)	Lynn Potter (D) Cresco	Hillman H. Sersland (R) Decorah
Woodbury	32	Charles S. Van Eaton (R) Sioux City	Leonard C. Anderson (R) Sioux City
			Louis A. Peterson (R) Lawton
Worth	41 (with Mitchell, Winnebago)	Jacob Grimstead (R) Lake Mills	Harold Mueller (D) Manly
Wright	37 (with Hamilton, Hardin)	John A. Walker (R) Williams	R. W. Hagie (R) Clarion

THE JOURNAL *Book Shelf*



BOOKS RECEIVED

HUMAN PITUITARY HORMONES (Ciba Foundation Colloquia on Endocrinology, Vol. XIII), ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., M.B., B.Ch., and *Cecilia M. O'Connor,* B. Sc. (Boston, Little, Brown and Company, 1960. $9.50).

FUNDAMENTALS OF CHEST ROENTGENOLOGY, by *Benjamin Felson,* M.D. (Philadelphia, W. B. Saunders Company, 1960. $10.00).

THE KYBERNETICS OF NATURAL SYSTEMS, by *D. & K. Stanley-Jones.* (New York City, Pergamon Press, Ltd., 1960. $6.50).

COMPLICATIONS IN SURGERY AND THEIR MANAGEMENT, ed. by *Curtis P. Artz,* M.D., and *James D. Hardy,* M.D. (Philadelphia, W. B. Saunders Company, 1960. $23.00).

1960-1961 YEAR BOOK OF OBSTETRICS & GYNECOLOGY, ed. by *J. P. Greenhill,* M.D. (Chicago, The Year Book Publishers, Inc., 1960. $8.00).

A SYSTEM OF MEDICAL HYPNOSIS, by *Ainslie Meares,* M.D., D.P.M. (Philadelphia, W. B. Saunders Company, 1960. $10.00).

THE QUESTION OF FERTILITY, by *Georges Valensin,* M.D. (New York City, Doubleday & Company, 1960. $4.50).

BOOK REVIEWS

OCCUPATIONAL DISEASES AND INDUSTRIAL MEDICINE, by *Rutherford T. Johnstone,* M.D., and *Seward E. Miller,* M.D. (Philadelphia, W. B. Saunders Company, 1960. $12.00).

This book should be listed as a "must" for the general practitioner, even though its title would indicate that it is intended for specialists. It contains a wealth of material that is too frequently altogether missed or overlooked by the practitioner who doesn't do a great deal of work as a "retained industrial physician." Actually, each doctor sees patients whose afflictions have resulted from the jobs at which they make their livings.

A section of the book is given over to the proper diagnoses of occupational diseases and injuries. It is very important for the doctor to be fair to the patient, to the employer and to the insurance carrier in determining the nature and the cause of the employee's condition.

Much space is given to the difficulties that have resulted from the increased use of chemicals, plastics, pesticides and weed-killers. In an agricultural state such as Iowa, this information is invaluable to a physician who sees many of the farmers, as we all do.

One chapter is devoted to physical agents, and includes perhaps the most complete material on vibration disease that I have seen collected. Other subjects covered in this chapter include occupational deafness, decompression illness, caloric and frigoric (heat and cold) diseases, and photoactinic disease.—*C. Harlan Johnston,* M.D.

RYPINS' MEDICAL LICENSURE EXAMINATIONS, ed. by *Walter L. Bierring,* M.D. (Philadelphia, J. B. Lippincott Company, 1960. $11.00).

Physicians faced with the ordeal of a state board examination for licensure will find this volume extremely helpful in that it provides a complete résumé of all phases of medicine. The book has long been regarded as ideal for this purpose.

The rich experience of the editor, due to his long association with federal and state boards of medical examiners, has added value to the book, and the new edition brings information in the various fields up-to-date.—*Everett M. George,* M.D.

CONGENITAL MALFORMATIONS (Ciba Foundation Symposium Series), ed. by *G. E. W. Wolstenholme,* O.B.E., M.A., M.B., B.Ch., and *Cecilia M. O'Connor,* B.Sc. Boston, Little, Brown and Company, 1960. $9.00).

This volume represents the combined thinking of many authorities who were assembled by the Ciba Foundation for a symposium on congenital deformities. As might have been expected, many basic concepts are presented, with additional bibliographies attached.

All physicians will find this book helpful in refreshing their knowledge of this important subject.—*Everett M. George,* M.D.

SYNOPSIS OF PATHOLOGY, FIFTH EDITION, by *W. A. D. Anderson,* M.D. (St. Louis, The C. V. Mosby Company, 1960. $9.25).

It is a pleasure for me to review the fifth edition of Anderson's SYNOPSIS OF PATHOLOGY, for one of its predecessors, the second edition, crutched me through the medical school course in pathology during my traumatic sophomore year.

In keeping with Dr. Anderson's policy of presenting ". . . a concise synopsis in which essentials are included, but the broad outlines and patterns of disease are not obscured by a maze of detail," this book portrays the "forest," through pictures as well as words, but does not describe the "trees," discussions of which are to be found in many excellent ones of the larger pathology textbooks.

The author is to be commended for revising his presentations frequently, for pathology is dynamic, rather

than static as some suppose. New syndromes are being described, new correlations are being made, theories are being altered, and the relative amounts of space that should be allocated to the various diseases and groups of diseases vary from year to year. Dr. Anderson has taken all these different factors into consideration in preparing this most recent version of his concise and authoritative volume.

Any physician should find it of value.—*David Baridon, Jr.*, M.D.

YOUR HEART, A HANDBOOK FOR LAYMEN, by *H. M. Marvin*, M.D. (New York City, Doubleday & Company, 1960. $4.50).

Dr. Marvin, a past-president of the American Heart Association, has written an octavo volume on the circulatory system (primarily the heart) and its disorders. He writes entertainingly and authoritatively on a subject dear to him. He includes in his discussion many subjects and questions with which patients are likely to be concerned. These topics include the relationships of obesity, tobacco and heredity to heart disease. He answers the "unanswerable questions" in convincing fashion, in the hope that the fears of the patient may be allayed through the acquisition of knowledge. One feels, in reading the book, that Dr. Marvin's empathy must help greatly to assure and comfort his patients.

This book could well be recommended or lent to patients with heart disease, or could be left in the waiting room for their perusal. It might also be eminently suitable for study by nurses and by the curious in high schools and colleges.—*Daniel A. Glomset*, M.D.

ENCYCLOPEDIA OF MEDICAL SYNDROMES, by *Robert H. Durham*, M.D. (New York City, Paul B. Hoeber, Inc., 1960. $13.50).

This volume presents details of nearly 1,000 recognized syndromes. Descriptions are concise. There is extensive cross-indexing. Eponymic and descriptive names for syndromes are used extensively in medical communication, and for this reason, a volume of this nature is of some value in a medical library.—*Lauren G. Peterson*, M.D.

EDEMA, MECHANISMS AND MANAGEMENT: A HAHNEMANN SYMPOSIUM ON SALT AND WATER RETENTION, ed. by *John H. Moyer*, M.D., and *Morton Fuchs*, M.D. (Philadelphia, W. B. Saunders Company, 1960. $15.00).

This is an extensive review of the etiology of edema formation and management. Over 90 investigators have contributed to this unusual symposium.

The individual papers are brief but informative. They are organized in such a way that they complement one another. Lively panel discussions are included in the volume, and these often help to clarify the papers and are in many ways the more informative.

The first part of the book is, logically, a review of fluid and electrolyte physiology. The current concepts of such things as basic as membrane permeability, volume and pressure imbalance are presented. Renal physiology is reviewed, as are the neural and endocrine influences on fluid volume and electrolyte composition.

The pharmacology and therapeutic use of diuretics are reviewed in part two. The more recent thiazides and the spirolactones are discussed. The remaining sections take up the clinical entities, their pathophysiology and their therapy. Hypertension, liver disease, congestive heart failure, renal disease, toxemia of pregnancy, premenstrual tension and iatrogenic edema are the titles of various sections.

I think the editors have prepared a valuable volume from a timely and worthwhile symposium.—*Loren G. Peterson*, M.D.

THE MANAGEMENT OF FRACTURES AND SOFT TISSUE INJURIES, by the Committee on Trauma of the American College of Surgeons. (Philadelphia, W. B. Saunders Company, 1960. $5.00).

There are many texts on the various methods of handling fractures, but this book, compiled by the Committee on Trauma of the American College of Surgeons, combines an outline of the treatment of fractures with a similar guide to the early care of soft-tissue injuries. Obviously, the text can be accepted as authoritative in both fields.

It is highly recommended to the general practitioner and the student for guidance in the treatment of accidental injuries.—*Everett M. George*, M.D.

COMMUNITY MENTAL HEALTH FACILITIES

The next 10 years will see a "drastic departure" from the traditional large hospital for the mentally ill, Dr. Mathew Ross, medical director of the American Psychiatric Association, has predicted in the November, 1960, ARCHIVES OF GENERAL PSYCHIATRY. Whereas the 1,500-bed hospital has been considered optimal, that figure has been pared to 500 by general consent, and many think 200 would be preferable.

"Our pleas now are for open hospitals, day hospitals, night hospitals, half-way houses, sheltered workshops, after-care programs, outpatient departments, clinics and community mental health centers," Dr. Ross says. "We believe that no community general hospital of any size should be considered truly 'general' unless it cares for psychiatric as well as for other patients. We also maintain that a public mental hospital cannot do its job unless it is integrated into a network of community facilities."

He goes on to say that psychiatrists have become increasingly optimistic about the chances of their being able to help patients. A decade ago, he says, they were reluctant to say that active treatment would rehabilitate as many as 60 per cent of patients. Now it is not at all uncommon to hear it said that 80 to 90 per cent of such patients can be helped, provided that community support is established.

Iowa Chapter of the American Academy of General Practice

IMPRESSIONS OF THE S.O.C. MEETING

The AAGP state officers' convention at Kansas City in September gave plenty of evidence that the Academy has "grown up." It is no longer a struggling, infant group, but an efficient organization that "knows where it has been and where it is going." But neither has it grown old and inflexible. The alternative approaches suggested as solutions to the variety of problems that were discussed indicated the vitality of youth without its rashness.

The first subject on the agenda was legislation at the federal and state levels. It was stressed that the family physician can either initiate or influence voters' attitudes toward local issues because his opinion carries extra weight in consequence of his high standing in the community. But the election is over, and the physician's immediate job in the legislative area is that of making sure that proper legislation is passed in Washington and in our state capitols.

HINTS ON HOW TO APPROACH CONGRESSMEN

At this point it is opportune to say a word about effective technics in the appeals we make to congressmen and legislators. When you write to one of these men, be polite rather than violent. Agree with him when you can; indeed, go out of your way to express appreciation for those of his actions of which you approve. Be tactful in disagreeing with him, and give him specific reasons for your differing views. You can't change a viewpoint by telling a man that he is wrong, but you can gain his support for your ideas if you can convince him of the rightness of your arguments.

Many letters to lawmakers haven't been sent, we suspect, merely because the would-be letter-writer was in doubt about the proper forms of inside address and salutation. Here are some models:

The Hon. Richard Roe Senate Office Building Washington 25, D. C.	The Hon. Daniel Dow House Office Building Washington 25, D. C.
Dear Senator Roe:	Dear Mr. Dow:

The forms of address in letters to members of the General Assembly of Iowa are essentially the same, except of course for the place to which the letter is addressed. As soon as the 1961 session of the General Assembly begins, mail to legislators should be sent to the State Capitol, Des Moines 19.

When you are writing on a specific issue and are urging action, stick to that one subject.

Leave no room for misunderstanding about the action you want him to take.

Be brief and clear.

Do not copy printed material, or enclose any with your letter.

Present your personal viewpoint—how the issue affects your community and your patients.

Don't feel that you have to be an expert on non-medical matters in order to express an opinion on them; but remember that you *are* an expert on medical legislation.

Don't rant and don't threaten.

Use your own words. Canned lobby material is largely ineffective, but personal letters do receive prompt attention. A legibly handwritten postcard is excellent. Telegrams are third best.

When the lawmaker has helped, be sure to thank him.

Request an answer.

Writing regularly is an effective method, and you can always send off letters or wires in between times about specific issues. Pick a date, such as the first of the month, and tell the congressman your views on general issues such as foreign aid, farm surplus control, etc. Mention, if you can, some issue on which you agree with his vote. Conservation matters, for instance, are safe. State your opinion on whatever medical legislation is under consideration. You might give him the results of informal polls you have conducted among doctors in staff rooms, nurses on the floors, etc., so that he can know the consensus of these groups on all types of legislation. If you feel competent to interpret the attitude of your community on these matters, do so. At the end of the session, write to the lawmaker and thank him for reading your communications.

All letters should be originals. Under no circumstances indicate that you are sending a carbon copy to the executive secretary of the State Med-

ical Society or to some other official. (This has happened.)

THE AAGP'S CLASSIFICATIONS OF COURSES

Since continuous postgraduate education is the foremost purpose of the Academy, the problems concerning the financing of some of the required meetings were discussed at the state officers' conference. Several pharmaceutical companies are particularly anxious to help doctors in thinly populated areas who don't have access to a great number of meetings.

The factors considered in putting courses into either of the two classifications were discussed. There is no attempt on the part of the Academy to judge the relative worths of meetings and to indicate preference by labelling some "Category I" and others "Category II." The distinction reflects the presence or absence of prior planning and approval by the AAGP. All Category I meetings must have been planned in cooperation with the Academy, and its name must be accorded equal billing on the programs. These requirements serve a two-fold purpose: (1) Academy members are assured that the meetings will be of value to them in general practice; and (2) the Academy is recognized as an *educational* organization.

HOSPITAL PRIVILEGES FOR GP'S

Dr. Charles Cooper, of the Joint Commission on Hospital Accreditation, was emphatic in his denial that his organization is trying to subvert the hospital-staff privileges of general practitioners. He stated categorically that hospital privileges should not be limited to "board" men, and that surgery should be done by those qualified by training or experience. The Joint Commission has no direct control over hospitals, and most difficulties arise on the local level. The general practitioner must maintain as high a level of practice in each clinical section in which he works as does the specialist, but for administrative purposes, there should also be a general practice department.

Each inspector is briefed by Dr. Babcock and the board before visiting hospitals, but many problems still arise—some personal and some technical. Dr. Cooper urged that each hospital should set up a permanent committee to deal with some of these issues. He suggested that this committee should consist of from three to six members appointed by the president of the medical staff to serve staggered six-year terms. The duties of this committee should be: (1) to keep abreast of the latest requirements of the Joint Commission by studying the publications of that body; (2) to inform the medical staff and the hospital administration of changes in Joint Commission policy; (3) to make recommendations for improving the standards of medical and custodial care in the hospital; and (4) to confer with the inspector from the Joint Commission or with its director whenever questions arise concerning hospital accreditation. Long terms for the committee members would insure continuity for the committee and would simplify the job that the inspector must perform.

THE AAGP'S FUTURE

Mr. Mac Cahal, the executive director of the AAGP, presented a brief review of the Academy's 12-year history, and in a dramatic way gave his ideas regarding its future. He has prepared a short film concerning "Life, Liberty and the Pursuit of Happiness" and how the spirit and purpose of the AAGP fits into that concept of the American tradition.

Other areas that were explored included public relations, especially as regards newspaper stories. The small, local newspapers do a better job for doctors than do the large city newspapers, which love dramatic stories that may not please the doctor.

RELIEF FOR NASAL AND SINUS CONGESTION

At the mid-November meeting of the American College of Chest Physicians, in New York City, Dr. E. R. Pons, Jr. reported good to excellent results in 70 out of 100 patients who used a new device for unblocking the nose and the nasal sinuses. It is an instrument developed by a research team of which Dr. Alvan L. Barach, of Columbia-Presbyterian Hospital, is the head.

The technic utilizes a simple plastic spray bottle called Phenyl-Drane designed specifically to produce a negative pressure of 60 mm. Hg (in contrast to a normal atmospheric pressure at sea level of 760 mm. Hg). The bottle is capped by a special nosepiece designed to fit sungly into the nostril. It contains neomycin, and gramicidin, together with the nasal decongestant phenylephrine. The patient first squeezes the medication into his nose and then, to create the negative pressure, he uses his finger to press the other nostril shut and then swallows, with the mouth closed. During the swallow, he releases the squeeze bottle, causing air to be sucked out of the nose, forcing the blocked sinus passages open and releasing air that has been trapped in the sinuses. When the swallow is over and the mouth and nose are open, the return to normal pressure pushes the medication through the opened sinus passages and into the sinuses. The patient repeats the procedure from four to six times a day.

Other studies, conducted on patients with common colds and other forms of nasal congestion, showed an average increase of 25 per cent in nasal ventilation after use of the bottle, thus illustrating its effectiveness in unblocking the nose and sinuses. "The new method," Dr. Pons declared, "is effective and practical in the treatment of sinusitis as well as in allergic rhinitis, nasopharyngitis and vasomotor rhinitis."

STATE DEPARTMENT OF HEALTH

Edward G. Zimmer
COMMISSIONER

ISONIAZID PROPHYLAXIS AMONG TUBERCULIN-POSITIVE CHILDREN

A control study of 2,750 children, made by the U. S. Public Health Service in cooperation with pediatricians in 33 clinics throughout the country, has established two facts: (1) For children under four years of age who have asymptomatic primary tuberculosis, the risk of extrapulmonary complications is high. (2) Isoniazid (INH) is capable of preventing 85 per cent of these complications.

RISK OF EXTRAPULMONARY COMPLICATIONS AMONG TUBERCULIN-POSITIVE CHILDREN DURING TWO YEARS FOLLOWING DIAGNOSIS

		Risk by Type of X-ray Involvement		
Age	*Risk With No X-ray Involvement*	HILAR AND/OR PARENCHYMAL	PARENCHYMAL	*Average Risk*
Under 1 yr.	1 in 30	1 in 8	1 in 6	1 in 11
1-4 yrs.	*	1 in 36	1 in 14	1 in 25

* The risk among the tuberculin-positive children 1-4 years of age with "essentially negative" x-rays was 1 in 95.

In this country today, tuberculosis infection rates among young children are low, and a physician may have to give many tuberculin tests before discovering a single reactor. However, the high risk for those who do react and the effectiveness of isoniazid prophylactic treatment in eliminating that risk make routine tuberculin testing of all children under four thoroughly worthwhile.

As a result of these findings, the U.S.P.H.S. recommends 5 mg. of isoniazid per kilogram of body weight every day for one year

For all infants under one year who react to the tuberculin test

For all children from one to four years of age who react to the tuberculin test and have x-ray evidence of primary tuberculosis.

REFERENCES

1. U. S. Public Health Service, Tuberculosis Program: Prophylactic effects of isoniazid on extrapulmonary complications of primary tuberculosis in children. Presented by Frank W. Mount at Fifth International Congress on Diseases of the Chest, Tokyo, Japan, September, 1958.
2. Pamplona, P. A., and Jones, G. R.: Isoniazid prevents tuberculous meningitis. (In press).

POISON INFORMATION CENTER DATA

In June, 1957, a Poison Information Center was opened at Blank Memorial Hospital in Des Moines. This is an information center for physicians and serves the entire state. There are numerous subcenters. The Iowa Poison Information Center is affiliated with the National Clearing House of the U. S. Public Health Service.

When a call for information is received, a record is made and a home call ensues. In 1959, public health nurses were asked to make the home investigations. All cases occurring outside the Des Moines city limits were referred to the Division of Maternal and Child Health of the State Department of Health. From this Division they were referred through the regional nurse supervisor to the local public health nurse.

From July, 1959, to July, 1960, public health nurses made 115 such home investigations. This is some of the information that they gathered:

1. Age of persons affected:

Under 1 year	4	4 years to 5 years	6
1 year to 4 years	100	Adults	5
			115

In the remainder of the report the five adults are not included.

2. Who cared for the child:

Parents	95	Sibling	3
Baby sitter	1	Not indicated	11
			110

3. Substances causing poisoning:

Aspirin or aspirin compound	30	Cosmetics	6
Household products	25	Prescription drugs	16
Pesticides	12	Non-prescription drugs	11
		Miscellaneous	10
			110

Household products included these kinds of items: furniture polish, hand cleaner, drain cleaner, kerosene and laundry preparations. The miscellaneous group included a wide variety of substances, but some of them were: bittersweet berries, methyl chloride from Christmas tree lights, spoiled food and eyeglass cleaner.

4. In what room in the house were these items found?

Kitchen	38	Living room	6
Bathroom	20	Basement	7
Bedroom	17	Other	18
Dining room	4		
			110

Other places were garage, barn, back porch and outside. One might conclude that the kitchen is the most dangerous room in the house.

5. One of the questions asked on the investigative record is: "Was the substance in its usual place?" The question was not always answered, but in 38 instances the answer was "No." It was quite a revelation to find that the usual locations for many of the harmful substances were these kinds of places:

Baby bassinet	Top of radio in kitchen
Purse	Top of chest in bedroom
Basement floor	Open shelf behind bathroom
Fishing tackle box	stool
Kitchen window sill	On top of washing machine

During the course of the interview, the nurses usually asked the mother how the accident happened. These are typical circumstances for accidents to children in the 1 to 3½ year age group:

Case 1. Aspirin was left on the chest of drawers; child climbed upon diaper pail to get it. Child can get cap off the bottle but mother cannot.

Case 2. Child is a climber; climbed on drawers of kitchen cabinet to get at shelves. Mother was in the basement.

Case 3. Child is very curious and gets into everything.

Case 4. Child got out of bed early and went looking for food. Other members of the family still in bed.

Case 5. Older child had been given some aspirin for a cold; younger child 3½ years took some, feeling he should have some.

Case 6. Accident happened when child was playing alone; eats everything. Has taken turpentine, antihistamine tablets; this time "No-Doz."

Although there were no fatalities among these 110 Iowa children, on a national level the ingestion of poisons ranks third among the causes of accidental deaths among the "toddler" group. Public health nurses and physicians in private practice should be concerned about safety in the home. Knowledge of normal growth and development of children plus a recognition of the need for becoming "safety conscious" are valuable tools that the public health nurse and the doctor can use in helping families combat this problem.

Children in the "toddler" age group explore with their eyes and mouths as well as with their hands and feet. This is the time when they learn the flavor, consistency and texture of many substances. These are important learnings. All of us want children to explore, for this is one of the ways they learn. We need to recognize, however, that the toddler has "poor judgment" and that it takes a long for him to develop good judgment. Doctors and nurses can sharpen their own knowledge of the normal growth and development patterns of children and learn to impart some of this knowledge to parents during home visits. In addition, they can do "anticipatory guidance." The advisor, after assuring parents that every child has the urge to explore, can ask, "How can we make your home safe for them to do these things?"

Being a parent of a young child is a hard job. It involves being on the job 24 hours a day. There is no vacation while the parent is responsible for the child. In the accident reports made by the public health nurse, the child was frequently alone in a room. Perhaps she or the family doctor can help a young mother in making plans for safe play areas. A wise thing for the mother and father to do so to put away harmful and breakable objects when the child is in this "toddler" period.

Then there is the whole area of the investigative visit. Many parents will have guilt feelings about the accident. A thoughtless interview can intensify these feelings and engender feelings of hostility toward the doctor or nurse. Time spent on developing interviewing skills will be time well spent. Such phrases as: "Tell me about it"; "Do you get any help in the care of your children?" and "How do you manage?" may encourage the mother to discuss the problem of managing the activities of a toddler. Telephone calls cannot substitute for the home visit.

Home safety is not a topic to be disposed of at one visit. As children grow older it assumes new aspects. It is a problem that deserves continuous attention and study by both physicians and public health nurses.

SCHOOL IMMUNIZATION SURVEYS

The benefits of a three-year-old Indiana law requiring the inclusion of questions on immunization in the kindergarten-admission formalities were reviewed in the October, 1960, issue of PUBLIC HEALTH REPORTS.* The Indiana health commissioner had persuaded the legislature not to pass a compulsory immunization law, for the reason that parents might thus be encouraged to neglect having their children inoculated in infancy. The immunization survey at the time of the children's entry into school, however, had his approval.

The Indiana State Board of Health publishes, annually, an outline map of the state, in which the counties deficient in immunizations are shaded, and the counties with 70 per cent or more of kindergarten entrants fully immunized are shown

* Marshall, A. L., Jr., and Offutt, A. C.: Noncompulsory immunization law for Indiana school children. PUB. HEALTH REP., 75:967-969, (Oct.) 1960.

in white. PTA and other such organizations have interested themselves in propagandizing infant inoculations against smallpox, tetanus, diphtheria, pertussis and poliomyelitis so that their counties may no longer be shaded on the map.

MEDICAL HISTORY OF WORLD WAR II

Lieutenant General Leonard D. Heaton, surgeon general of the Army, is anxious to secure maximum distribution of the series of books collectively entitled HISTORY OF THE MEDICAL DEPARTMENT, UNITED STATES ARMY, IN WORLD WAR II.

As a result of the neglect that was accorded a comparable earlier series, many of the medical lessons plainly set forth in the HISTORY OF WORLD WAR I had to be relearned, at the expense of time, effort, limbs and lives, since no more than a few Medical Corps officers knew of its existence. A striking example was the technic of delayed primary wound closure that had been practiced during World War I and recorded in the history of that war. It was developed again in the later war only after a long and costly period of trial and error.

Of the 48 volumes programmed for the series, 15 have been published and can be purchased at modest cost from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The price for all 15 volumes is $66.50, and the price for indvidual volumes is comparably low. The list of titles and authors follows:

"General Surgery"—Edited by Michael E. DeBakey, M.D.

"Neurosurgery," Volume I (Head Injuries)—Edited by R. Glen Spurling, M.D. and Barnes Woodhall, M.D.

"Neurosurgery," Volume II (Spinal Cord and Peripheral Nerve Injuries)—Edited by R. Glen Spurling, M.D. and Barnes Woodhall, M.D.

"Hand Surgery"—Edited by Sterling Bunnell, M.D.

"Ophthalmology and Otolaryngology"—Edited by M. Elliott Randolph, M.D. and Norton Canfield, M.D.

"Orthopedic Surgery, European Theater of Operations"—Edited by Mather Cleveland, M.D.

"Orthopedic Surgery, Mediterranean Theater of Operations"—By Oscar P. Hampton, M.D.

"Physiologic Effects of Wounds"—Edited by Fred W. Rankin, M.D. and Michael E. DeBakey, M.D.

"Vascular Surgery"—Edited by Daniel C. Elkin, M.D. and Michael E. DeBakey, M.D.

"Cold Injury, Ground Type"—By Tom F. Whayne, M.D., and Michael E. DeBakey, M.D.

"Dental Service"—By George F. Jeffcott, D.M.D.

"Environmental Hygiene"—By James Stevens Simmons, M.D. and others

"Personal Health Measures and Immunization"—By John E. Gordon, M.D., Tom F. Whayne, M.D. and others

"Communicable Diseases," Volume IV—By John E. Gordon, M.D., Joseph Stokes, M.D. and others

"Hospitalization and Evacuation, Zone of Interior"—By Clarence McKittrick Smith

MORBIDITY REPORT FOR MONTH OF OCTOBER 1960

Diseases	*Oct. 1960*	*Sept. 1960*	*Oct. 1959*	*Most Cases Reported From These Counties*
Diphtheria	0	0	0	
Scarlet fever	150	42	158	Jefferson, Johnson, Polk, Woodbury
Typhoid fever	3	1	0	Clinton
Smallpox	0	0	0	
Measles	55	18	33	Dubuque, Linn, Story
Whooping cough	22	6	41	Crawford, Polk, Pottawattamie
Brucellosis	26	12	17	Dubuque
Chickenpox	163	9	123	Des Moines, Dubuque, Linn, Polk, Scott
Meningococcic meningitis	1	1	2	Polk
Mumps	196	108	52	Des Moines, Dubuque, Linn, Polk, Pottawattamie
Poliomyelitis	0	3	39	
Infectious hepatitis	38	29	7	Lee, Polk
Rabies in animals	26	7	16	Boone, Davis, Dickinson, Iowa
Malaria	0	0	0	
Psittacosis	0	0	0	
Q fever	0	0	0	
Tuberculosis	62	30	51	
Syphilis	146	71	111	
Gonorrhea	192	89	112	
Histoplasmosis	1	0	0	Pottawattamie
Food intoxication	22	0	0	Buchanan
Meningitis (type unspecified)	1	3	19	Polk
Diphtheria carrier	0	0	0	
Aseptic meningitis	3	9	3	Polk
Salmonellosis	2	2	5	Buena Vista, Monroe
Tetanus	0	0	2	
Chancroid	0	0	0	
Encephalitis (type unspecified)	3	3	3	Carroll
H. influenzal meningitis	0	0	0	
Amebiasis	1	1	1	Hardin
Shigellosis	8	10	2	Scott
Influenza	211	7	4	Buena Vista



Doctors of Medicine Offer Some Suggestions for

The Iowa Implementation of the Kerr-Mills Bill

Very wisely, we think, the U.S. Congress has enacted Public Law 86-778 (the Kerr-Mills Bill) as a means of assuring adequate medical care to the elderly. It was far preferable to the Forand Bill, which would have failed to provide such attention to a great many people who aren't eligible for Social Security and can't pay for care themselves, and would have furnished it to millions of others who are quite able to finance the expense out of their own pockets. Now, the General Assembly of Iowa must decide whether or not this state is to make use of the federal moneys available under the terms of the new law, and if so, it must then decide upon the future scope of the Iowa programs for these people, since Congress has chosen to leave each state free to make its own plans.

Public Law 86-778 will help the states pay for health-care programs benefiting two of the groups of people over 65 years of age: (1) for recipients of Old Age Assistance grants, the law facilitates an expansion of health benefits; (2) for individuals with limited resources, it offers help to the states in setting up entirely new health-care arrangements. In each instance, the federal government undertakes to pay a fixed share of the cost of whatever program the state government chooses to adopt, and at least as regards the plan for the near-needy, the state is free to set eligibility requirements within very broad limits.

THE VENDOR PAYMENT PROGRAM

Iowa has had an Old Age Assistance program ever since 1935, but not until January 1, 1959, did its grants include payments for medical care.

Under the Vendor Payment Program, initiated in Iowa just last year, M.D.'s, D.O.'s, dentists, pharmacists, chiropodists and chiropractors are being paid directly for health-care services and commodities provided to OAA recipients in their own homes or in nursing homes, and in the practitioners' offices and clinics. As of August, 1960, a total of 34,255 Iowans were receiving monthly OAA cash grants averaging $73.92, and an average of $7.48 per OAA recipient was being paid to the purveyors of health services on behalf of those people. In addition, of course, the counties and the state were continuing to provide care for them, as for other indigents, either at local hospitals or at University Hospitals, Iowa City.

It is hard to say just what share the federal government has been contributing to each vendor payment for OAA health care, for reimbursement has been made according to a rather complex formula, and it has been computed on the total of OAA expenditures. Out of $81.40, the average Iowa grant, federal funds have made up $46.13 and state funds $35.27. Everyone can decide for himself whether the $7.48 for vendor payments should be regarded as having come from the federal share, from the state's share, or proportionally from both.

Unlike the OAA statute, Public Law 86-778 is designed specifically to aid the states in providing *health* care. Under its terms the average vendor payment in Iowa can be raised from $7.48 to $12.00 per OAA recipient per month, and of that latter sum the federal government will pay 62.23 per cent. The State Board of Social Welfare has wisely suggested that the increase in funds available for this purpose be used in providing nursing-home care to those of the OAA recipients who need it. It is estimated that under the new law Iowa can receive over $3,000,000 per year from the federal government to help in providing health care to OAA eligibles.

MEDICAL ASSISTANCE TO THE AGING (MAA)

Public Law 86-778 authorizes the release of unlimited federal funds to the states for use in providing health services to elderly people who are not OAA recipients "but whose income and re-

sources are insufficient to meet the costs of necessary medical services." For this purpose, the federal government has undertaken to reimburse Iowa to the extent of 63.23 per cent of expenditures made prior to July 1, 1961, and to the extent of 58.48 per cent of expenditures made between then and June 30, 1963.

If the MAA program is to be instituted in Iowa, the General Assembly will have to decide who may have help and what sorts of care will be subsidized for them. In general, the federal law necessitates eligibility requirements resembling those that OAA applicants have had to satisfy, but there are differences, the most important of them being that residence requirements must be far less stringent.

In setting financial limits for MAA eligibility in Iowa, the Legislature can impose either a simple test or a comprehensive one. The first of these would involve nothing more than accepting everyone over 65 years of age whose income and net worth failed to exceed certain established limits. It would be easy to administer, but it would discourage individual responsibility, it would exclude some people who really need help, it would include a great many who are far less needy than the figures seem to show, and regardless of how large a fund were set up to finance the program, the money would soon be seriously depleted and additional restrictions of some sort would have to be imposed.

The comprehensive type of eligibility determination would involve considerably more than merely ascertaining that the applicant's income and net worth fell within the established limits. Such a person might be disqualified if one of his close relatives had been, and could very well continue, paying health-care bills for him. And the smaller the anticipated expenses, the less likely he would be to get help from the state. For instance, a marginal applicant might be refused if he asked that the cost of just two or three office calls be paid for him, but would be accepted if it were shown that he needed, but hadn't enough money to pay for, a cholecystectomy.

Moreover, an applicant for MAA might very properly be required to present a physician's statement attesting to his need for a specific type of therapy. As a matter of fact, the Department of Health, Education and Welfare has declared: "The need for medical care beyond those medical services the individual usually initiates will be based on medically demonstrated facts. Obviously, the best source of these facts is the attending physician." As a further means of forestalling overutilization, the near-needy client might quite properly be called upon to pay a small share of the cost of each MAA-subsidized service.

The federal law mentions 12 types of services, but does not require that a state's MAA program include all or any particular ones of them. The only express requirement is that each program include some "institutional" services (e.g., hospital and nursing-home care) and some "non-institutional" services (e.g., home and office calls, and prescription drugs). Here again, the Legislature will have a choice between providing limited services to a great number of persons, and providing really comprehensive care for those who need it most. We are inclined to favor the granting of comprehensive care to those who really need it, rather than limited care to a larger group.

As regards choosing an agency to administer the MAA program, the Legislature has several alternatives. The Department of Social Welfare could manage it, with physicians and other interested "vendors" serving as its advisors, as the federal law requires. The Vendor Payment Program for OAA recipients has been operated thus for the past two years, but despite the best intentions of all concerned, a situation has developed that is most unsatisfactory to doctors of medicine and possibly to the other "vendors."

Instead, we believe that the Legislature should let the program be administered by an independent fiscal and managerial agent acting under the supervision of, and under contract to, the State Board of Social Welfare. Colorado is an outstanding example of a state where an elaborate program of health care for the aged has been administered through Blue Shield as a sub-contractor. In Nevada, the Vendor Payment Program is administered through the state medical society. In Iowa, the Veterans Home Town Medical Care Program was successfully administered by the Iowa State Medical Society and Blue Shield, together, and the ISMS is now serving as fiscal agent for the federal government's Medicare program, by means of which health care is provided to the dependents of servicemen.

It is also possible that the MAA program could consist of purchasing Blue Cross and Blue Shield or commercial insurance company coverages for eligible individuals. The federal law expressly authorizes "expenditures for insurance premiums for medical or any other type of remedial care or the cost thereof." Such an arrangement could very well result in maintaining a higher degree of self-respect among recipients.

If the program were to be administered directly by government, the physicians of Iowa would greatly prefer that county instrumentalities be used. They feel that local control is desirable both for the physician and for the patient.

CONCLUSION

Iowa physicians feel that MAA funds should be used to provide complete medical care for those of the elderly who really need but cannot pay for it, and that the money should not be used to provide partial care "as a matter of right" to a larger group who may or may not have adequate resources for meeting the costs without governmental assistance. Doctors urged passage of the Kerr-Mills Bill, and they can be counted upon to support sound enabling legislation when the General Assembly of Iowa considers the various alternatives that are open to it.



MEDICAL HISTORY

120 Years of the Medical Profession In Cedar County, Iowa

Fourth Installment

H. E. O'NEAL, M.D., AND MRS. VADA YULE KLITH

TIPTON

It may be that the Cedar County doctors of the 1890's and the 1900's have engaged in few of the sorts of exploits that made their predecessors' lives so colorful, or it is possible that the editors of the local papers have had new sets of motives and, perhaps, prejudices during the last few decades. But although physicians have made far less spectacular news in recent years, our readers will see that the transition was gradual.

Dr. Laura House Branson met the pharmacy requirements established in Iowa law, received her commission in 1890, and fitted up a neat drugstore at West Branch. She moved to Iowa City in 1898.

Dr. Crawford McWilliams, a graduate of the College of Physicians and Surgeons, Chicago, practiced for a few months in Tipton before locating at Lowden in September, 1890. In 1894, he was appointed health officer of Massillon Township to replace *Dr. F. X. Joerger,* who had died from self-administered poison. Dr. McWilliams still held that position in 1900.

In September, 1893, a *Dr. Johnson,* who had been in Stanwood with the Kickapoo Indian Medicine Company, returned to practice and was soon busy making calls and treating patients.

Dr. Eli Browning, a 1894 graduate of the S.U.I. Medical School, located in Tipton immediately after finishing his studies. As a student, he had worked with Dr. Schrader in Iowa City. Dr. Browning was superintendent of the Methodist Sunday School, and in 1896 he led a revival meeting at the Methodist Church. Drs. Browning and Wade formed a partnership, explaining that outside business interests were taking too much of Dr. Browning's time to permit his practicing solo. In 1897, he moved to Iowa City, but he returned to Cedar County in about 1903, locating at West Branch. In 1907, he was actively engaged in selling Texas lands.

Dr. Roscoe Arthur Nash had been born in Lowden, but had spent most of his boyhood in Wisconsin. He worked his way through S.U.I., and graduated in medicine in 1894. Then, after interning for a year at Mercy Hospital, Davenport, he opened his office in Tipton. He had been in Cedar County on hunting trips during his internship year, and after settling there he continued to bombard ducks and geese that perversely got in his way. He was always a member of the Tipton Hawkeye Club's annual game hunt.

Dr. Nash and Miss Ida Coutts were married in 1895, and two children were born to them, Adelaide and Roscoe C. Mr. John Coutts, presumably Dr. Nash's father-in-law, imported a splendid microscope from Paris, in 1896, and presented it to him. In June, 1898, Dr. Nash installed a direct galvanic battery of 30 cells for the treatment of nervous and other diseases. He was elected secretary of the Cedar County Medical Fraternity at its organizational meeting in 1898, and he was chosen secretary of the Cedar County Medical Society when it was formed in 1899, and when it was twice reorganized in 1903 and 1904.

Dr. Nash was president of the Hartwig Mining Company, which was interested in an Idaho copper mine. In 1906, he purchased a carriage designed especially for use by physicians, featuring a closed cab, but the next year he bought an automobile. A friend of his chauffeured it to Davenport in an hour and forty-five minutes, beating the time of the Rock Island trains. Dr. Nash had developed one of his farms near Tipton into a chicken ranch with a capacity of 15,000 birds. Old-timers in the area remember the individualistic construction of the buildings that he erected, and still refer to the place as "the chicken ranch." Dr. Nash died on August 1, 1909, after having been in poor health for several years.

Dr. Edward Grant Johnson graduated from Rush Medical College in 1887 and located in Stanwood sometime prior to 1896. He was president of the "picnic committee" that organized the statewide outing of the Modern Woodmen at Dubuque on June 30, 1897. He was a member of the Cedar

County Medical Fraternity from the time of its organization until he left the County in 1901.

Shortly before leaving for Carroll, Iowa, Dr. Johnson sued the City of Tipton for $3,500, for unlawful arrest and detention, and for "damages resulting to myself." He had been taken into custody a few weeks earlier, the moment he stepped off the train from Stanwood, against which town a smallpox quarantine was in force. He had been told that he must return on the next train, but when he had refused and then had lost his argument with the Tipton authorities, he had sat all day on a woodpile near the depot.

Dr. David Miller, who had been born and had grown to manhood in Cedar County, located in Sunbury in 1896, immediately after finishing his medical course. Later, he practiced in Muscatine for several years, and then he went to Chicago, where he died on July 22, 1914.

Dr. William M. Safely, a brother of Dr. Lewis Safely, graduated from the Chicago College of Physicians and Surgeons in 1885 and practiced in Bozeman, Montana, for several years before coming to Stanwood in 1896. After a few years, he returned to Bozeman, and died there on September 5, 1918.

Dr. J. Charles Shearer, a native of Tipton, graduated from S.U.I. in 1896. He located first at Stanwood, then after two years moved to Bennett, next, after a long illness, he settled at Wheatland, and in 1903 he came from Scranton, Iowa, to Tipton. Five years later, in 1908, the editor of the TIPTON ADVERTISER included him in a set of leap-year vignettes of eligible bachelors, viz.: "Dr. J. Charles Shearer, physician with a growing practice, a good feeler, but inclined to be a trifle backward; will have to be encouraged." Dr. Shearer moved to Allison, Iowa, on June 16, 1909—still a bachelor.

Dr. Battey came from Muscatine to Springdale in 1897. He presented a partial human skeleton to the seminary there—a much appreciated gift. He and his wife had relatives on the West Coast who sent them dried fruits, mistletoe, holly, etc. at the holiday season, and they always shared this largesse with their friends and neighbors. Dr. Battey was active in the Friends' Church, was a member of the school board, and was the census enumerator. At the 1899 Lyceum, he started a lively discussion by raising the question of whether there would be any sound in the world if all of the people were deaf.

Dr. Battey moved to West Liberty in 1902, to West Branch in 1910, and afterwards to Iowa City, where he was living with his family in 1922.

Dr. Victor W. Byrnes had been born in Walcott, Iowa, on February 7, 1874, and had graduated from S.U.I. in 1897. He had interned during the summer period of 1896 at Mercy Hospital, Davenport, and he located at Durant in 1897. He was several times Farmington Township delegate to the Republican County Convention. He sold his Durant practice in 1905, and for almost two years practiced in Tipton. He then returned to Durant and served that community until his death in 1944.

Dr. J. M. Howe opened an office at Rochester in 1897, and was health officer of Rochester Township for a number of years. He enjoyed living near the river and made the most of the recreational opportunities it provided. In 1900, he had a fine new boat, the *Ida Mae,* which had been built by the Burr Boat Building Company, of Rochester. Yet, Dr. Howe shook the sand burs from his heels, said good-bye to his boyhood home and friends, and started a new practice at Hillsborough, in August, 1901.

Dr. John C. Wade not only was a graduate in medicine but also had a M.S. from Cornell. He formed a short-lived partnership with Dr. Eli Browning at Tipton in August, 1897. Dr. Wade and *Dr. Georgia Stone* were married on December 22 of that year, and thereafter he had a partner in his family. The bride, during the previous two years, had been a staff member at Woman's Hospital, in Pittsburgh. Drs. Wade and Wade announced themselves, somewhat redundantly, as a "double partnership."

They sold their practice to Dr. A. E. Rodgers in May, 1899, and a month afterward they left for Guthrie, Oklahoma. Their trip was to be recreational, as well as a means of reaching their destination, and they purchased a closed carriage, a tent and camping utensils, planning to drive the entire distance. They said they would cover the 800 miles in less than six weeks.

Dr. A. D. DeFries was practicing in Lowden in 1898. He was the health officer of Massillon Township for several years. He was elected president of the Cedar County Medical Society at its organizational meeting in 1899. Dr. DeFries was living in Davenport in 1906.

Dr. Arthur Alanson Griffis had been born in Austinburg, Ohio, November 25, 1861, had moved to Jefferson, Ohio, with his parents in 1865, and had gone to school and then had become a teacher in the latter community. In 1885, he had entered the mercantile business. Ten years later, he had entered the Cleveland Medical College, and had graduated in 1898. During his last year there, the college was consolidated with the Cleveland University of Medicine and Surgery under the name of Cleveland Homeopathic Medical College.

Dr. Griffis located in Tipton in June, 1898. Almost immediately he made his first large purchase of new office equipment—a galvanic and faradic battery for the local treatment of nose, throat and ear ailments. The instrument also had an attachment for gynecologic work. In 1902, he installed an x-ray machine built by Dodd and Strouthers Company. As local health officer, Dr. Griffis was notified that local "culture" stations

were to be established in smaller towns and cities so that doctors could cooperate with the State Bacteriological Laboratory in diagnosing typhoid fever and tuberculosis. Kallam's Drug Store was to be the location in Tipton.

Drs. Griffis and Nash journeyed to Peru, Indiana, in 1906 to buy five-passenger touring cars. The vehicles were of 21 horsepower, and were manufactured by the Model Automobile Company, there.

Croquet was Dr. Griffis' chief recreation, and he was an expert at it. Early in June, 1906, he announced that the croquet season was open on the Griffis Court. He had purchased a new set of dogwood mallets, and the new arches were supplied with attachments for candles so that the coming of darkness could not bring an end to a game. The doctor played at Cedar Falls in June, 1914, and as the local newspaper reported it, "cleaned up a bunch of champion players." In September of that year, three men came from Cedar Falls to Tipton to play a five-game tourney with the local club.

Dr. Griffis had married Miss Addie Sutherland on September 10, 1888, and a daughter was subsequently born to them. The doctor was a member of the Hahnemann Society, the oldest homeopathic association in America, and for many years before his death, February 10, 1939, he was a trustee and the treasurer of the Tipton Presbyterian Church.

Dr. Calvin Grant Stookey had been born March 9, 1865, had attended school in Marion, Iowa, and had graduated from Coe College before entering Illinois Medical College. He finished his work at that institution in 1895, interned at a hospital in Cleveland, and then practiced at Troy Mills, Iowa for two years before locating in Mechanicsville in 1898. There he remained for the rest of his life, with the exception of about 10 years, 1917-1927, when he practiced at Olin and Toledo, Iowa. He married Martha Jane Moffit, of Mechanicsville, on December 3, 1902, and one daughter, Mary Isabelle, now Mrs. Cecil Smay, of Mechanicsville, was born to them. Dr. Stookey was a member of the Presbyterian Church, and served as one of its elders for many years. He was a member of the Cedar County Medical Society, the AMA, the Masonic and Eastern Star lodges, and the Modern Woodmen of America. After a long illness, Dr. Stookey died on December 16, 1938, at St. Luke's Hospital in Cedar Rapids.

Dr. Alonzo E. Rodgers was born in Fairfield Township in 1855. He obtained his early education there, but moved to Hopkinton in 1872 and graduated from Lenox College, there, in 1878. Then he worked in the office of Dr. H. H. Maynard, in Tipton, for a year before entering Rush Medical College. After graduating, in 1881, he practiced in El Paso until 1884, then returned to Iowa and maintained an office at Stratford for an additional five years before moving to Tipton in 1899, where he purchased the practices of the Drs. Wade. Dr. Rodgers was treasurer of the Cedar County Medical Society in 1900. On October 10, 1901, he married Nettie P. Templeton, and soon left to establish a practice in Stanhope. They had one son, Donald. Dr. Rodgers was a Gold Democrat, and held memberships in the Knights of Pythias and the I.O.O.F.

Dr. Charles Baker was practicing in Stanwood in 1900. He was a county health officer, a member of the pension board and a railroad physician for many years. He maried Miss Alice Soper in 1914.

Dr. Baker was an active member of the Cedar County Medical Society, and in 1917 he was a member of the committee that suggested the formation of a Medical Defense Committee "to take over the practices of enlisted men and credit their accounts with such proportion of fees as rightfully due." No report of the success of that plan has been discovered.

Following Dr. Baker's death in 1929, his family held a private sale to dispose of his drugs, instruments, books, etc.

Dr. H. R. Chapman was born June 30, 1873, at Monticello, Iowa. He was second in his high school graduating class of 1893. As an employee of the Diamond Creamery Company, of Monticello, he aided in the manufacture of some butter that took first prize at the World's Fair at Chicago in 1893. He studied and "read" medicine under Dr. McKenzie at Elwood, Iowa, then entered S.U.I. and received his medical degree there in 1901. He did some postgraduate work in Iowa City and in Chicago, but it took him less than a calendar year, for he opened an office in Bennett before the start of 1902.

In 1905 he moved to Durant, where he conducted a drug store in connection with his medical practice. He served as mayor for a two-year term, and then was elected to the senate of the Iowa General Assembly, representing the 24th District. Shortly thereafter, he returned to Bennett, where he twice was elected mayor. In 1902, he aided in the organization of the Davenport and Tipton Independent Telephone Company, a firm that in 1910 was capitalized at $60,000. He owned three-fourths of the stock, himself, and was its president and general manager. He continued as head of the telephone company until his death in 1926.

Dr. Chapman had married Miss Pearl Hiner on September 15, 1897, and they had two children, Eugene Ray and Vilera Imogene. The doctor was a member of the Masonic Lodge (both the Tipton Blue Lodge and the Mystic Shrine at Davenport), of the Knights of Pythias and of the Modern Woodmen of America. In 1906, he was president of the Cedar County Log Rolling Association, an organization made up of the M.W.A. camps.

Dr. David T. Nicoll had been born on December

1, 1866, on a farm near Clarence, and had commenced his medical education by "reading" and working under Dr. E. P. Anderson, of Clarence. After graduating from the medical school at Northwestern University in 1891, he had practiced first in Wisconsin and then in Clinton before returning to his home town in 1901. He bought Dr. Greig's partnership with Dr. Cheeseborough. He managed a 320-acre farm and owned the business block in which his office was located. He was a member and an elder of the Presbyterian Church, and was a member of both the local Masonic Lodge and the Consistory at Clinton, of the Modern Woodmen, and of the Yeomen. In 1905 he was superintendent of the Dayton district of the Anti-Saloon League. Dr. Nicoll, a Republican, served on the town council, was a member of the school board, and was health officer at Clarence. In 1917 he sold his practice to Dr. Frederick Laughlin and moved back to Clinton, but he is now living in Mitchellville.

Dr. J. H. Meyhaus was a physician in Sunbury in 1902, then he located in Durant in 1905, and remained there until 1910. He was elected Cedar County coroner several times. He left Durant in October, 1910, after selling his drug store, building and business, for $5,000.

Dr. H. A. Runkle was a physician in Lowden in 1903. He and *Dr. Murray* were a medical partnership in 1904. Dr. Runkle was a health officer and a railway physician for several years, and then sold his practice. Attempting a comeback, he repurchased it in 1918, but after eight months quit once more because of failing health, and moved to a farm he owned near Manchester, Iowa.

Dr. A. E. Sailor, a graduate of S.U.I. and a physician at Clarence, died of typhoid fever at University Hospitals, Iowa City, on June 10, 1903.

Dr. W. C. Tilden, of Stanwood, was present and presumably practicing as early as 1903, for in February of that year he was recorded as having married Miss Flora Walker. In subsequent years, besides being health officer of Fremont Township, he was city assessor and a member of the school board. In 1916, he was still there as a railway physician.

Dr. Lou Todd was the wife of lawyer Tilmon Todd, of Springdale. Her husband and their son, Carr, were present at her graduation from Keokuk Medical School in 1903. After practicing 24 years in Springdale, she went to Elkhart, Indiana, to make her home with the son just referred to, and she died there in April, 1928.

Dr. Louis Kelling came from Elkton, South Dakota, where he had been practicing, to locate at Lowden in 1904. He could speak German fluently, and was a graduate of the St. Louis College of Physicians and Surgeons. He had been reared in the southern part of Cedar County and had attended one of the Lowden schools about 15 years earlier. He had had one year of service during the Spanish War.

The first record of a Cedar County grand jury's indicting a man for practicing medicine without a license involved a *Dr. E. J. Ludlow*, of Mechanicsville. He had located there in 1904, and though he had twice failed the board examinations, he nevertheless had been advertising himself as a physician.

Dr. John J. Martin, a graduate of the Keokuk Medical School, located at Buchanan in 1904. He had been born in Seneca, New York, on April 18, 1868, and had received his early education in New York before leaving for Michigan at the age of 18. He married Miss Florence McCorkell shortly after his arrival in Buchanan, and their friends, 18 months later, pleasantly surprised them with a gift of some dining-room chairs on the eve of their departure for McCausland, Iowa. After practicing at the latter place for no more than four years, Dr. Martin moved to Davenport on November 15, 1910, and died there on December 19 of that year from appendicitis.

Dr. W. F. Rowser, a 1905 graduate of S.U.I., practiced only six weeks in Cedar County. He located in Downey in July, 1905, but his mother came to visit him on August 18, and he left with her for his home in Buffalo shortly thereafter.

Dr. Albert John Charlton was located in Bennett in 1906. In 1909 he was living in Ida Grove and had patented a new principle in gas engines. He moved to Davenport that same year. In 1914 he was in Lowden and had erected a new building and had opened a new office. In April, 1918, he was commissioned a first lieutenant and assigned to duty at Fort Riley, Kansas. He returned to Lowden after his war service, and was still there in 1932.

Dr. J. C. McGregor located at Downey in about 1907. He moved to West Branch in 1910, and purchased the residence west of the library. He was health physician of Springdale Township. In 1917, after being given a captaincy, he was returned from Texas on indefinite leave, and resumed his practice and built a new home.

Dr. J. C. Crum came to Clarence from Forest, Ohio, in December, 1908, and married Miss Ina Shillinglaw the following February. They went to Barien Springs, Wisconsin, and from there to Oregon. Later he returned and for a short time practiced at Mechanicsville, but the year is not known for certain. It probably was in about 1922. He was in Stanwood when he died, on May 8, 1948.

Dr. A. B. Hender, a graduate of S.U.I., practiced in Tipton from 1908 until 1912. He then left to join the faculty of the Palmer Chiropractic School, at Davenport. He died on September 26, 1943, at the age of 69 years.

Dr. J. W. Richards was a physician at West Branch in 1909. A few years later, he moved to Mechanicsville, and then left there in 1919 to practice elsewhere.

Dr. Ethel McKinley began practice in Tipton

in 1911, but in May, 1914, she moved to Oconto, Nebraska, to work with her uncle, Dr. John Wade, a physician who also had practiced in Tipton.

Dr. William Henry Jenks had been born at Shell Rock, Iowa, on July 14, 1885, had attended the medical school at Missouri University, and had graduated from the College of Physicians and Surgeons in Chicago. After being associated for a time with Dr. E. T. Alford, in Waterloo, he came to Tipton in 1914 and purchased Dr. Ethel McKinley's practice.

Following America's entry into World War I, he was commissioned a captain and landed at Liverpool on October 21, 1917. On loan to the British government, along with approximately 7,000 other doctors, he was attached to the British 5th Army Corps and put in charge of a division medical service. The next spring, while the Germans destroyed the 5th Army, Dr. Jenks remained in charge of an advance field hospital and first-aid station. He was taken prisoner, and had been both wounded and gassed, but he remained at his job of caring for the injured. A few days later the British counterattacked and retook the position, liberating the doctor. He was invalided across the English Channel, and upon his recovery, he was decorated by King George V at Buckingham Palace, receiving the Military Cross with three gold chevrons.

In November, 1918, he arranged for a month's work with the great English surgeon, Sir Alfred Pearce Gould. He wrote, "I thank my stars that I was lucky enough to have the Military Cross, for it would have been impossible to arrange without it."

Dr. Jenks was discharged at Camp Dix, New Jersey, on April 22, 1919, and returned to Tipton. He was elected the first commander of the Gary-Whalen American Legion Post in November, 1919. He saw the need for a hospital in Tipton, and in 1922 purchased the West Bethel Church building, intending to move it into town and use it for that purpose. As other times during his practice, he tried to create interest in a hospital, but his hopes were never fulfilled. Because of failing health, he was forced to retire in 1931, but he lived for another nine years. He died suddenly while at work in his garden at Pasadena, California, on April 22, 1940. Dr. Jenks was a member of the Masonic Lodge and of the Eastern Star. He and his wife were the parents of three daughters, Janet, Beverly and Billy.

Dr. Frank Preissman bought Dr. Russel's office fixtures and practice, and located at Mechanicsville in 1914. Two narcotics addicts caused considerable excitement, in 1916, by trying to hold him up. They were routed when Dr. Kerr came to Dr. Preissman's aid. Upon receiving his orders to report to the Base Hospital, Aviation Section, at Fort Worth, in 1918, he sold his practice to Dr. D. L. Young. After the War, he returned to Mechanicsville.

Dr. Herschel practiced in Mechanicsville in 1917, but he wasn't there long. It is remembered that he drove a little Model T Ford, but perhaps it wouldn't be too much to say that most people did, at that place and time. He was injured in an automobile accident, and died at University Hospitals, Iowa City.

A *Dr. McNerty*, recently discharged from the service, took over Dr. Herschel's practice in 1917.

Dr. C. H. Burke, a graduate of S.U.I., next purchased Dr. Herschel's office and practice in April, 1918. He had practiced at Algona, and had recently been discharged from the Army. He worked in Mechanicsville for a good many years before leaving to enter service in government hospitals. He is now retired and is living in Wauwatosa, Wisconsin.

Dr. Thomas Dana Jacobs graduated from S.U.I. on February 22, 1913. He was the first medical student who, at graduation, already had a large family, his eldest son being then 10 years old. Dr. Jacobs had started college at Ames, with the intention of becoming an electrical engineer, but had been forced to leave school when he suffered a severe attack of typhoid fever. Later, he had married Miss Hattie Snyder, of Grand Mound, and had engaged in the harness business. Then, at the urging of his brother-in-law, he had decided to become a physician and surgeon. At that time he had two children, and two more were born to him and Mrs. Jacobs while he was at the University. He worked his way through college by sewing pennants for the other students and by boxing and wrestling professionally. While at Ames he had won letters in football, baseball and track, and had set a state record in the 100 yard dash. He later had played professional baseball in Kansas. His love of athletics continued, and he either played on or managed teams in the towns where he practiced medicine.

One of his first surgical operations was the removal of his mother-in-law's breast. He performed this surgery on a dining room table, and when the town's electricity failed, he finished it by the light of automobile headlights shining in through the windows. He made his first office furniture out of old packing cases.

Dr. Jacobs served in World War I, attaining the rank of lieutenant colonel, and then located in Durant before the close of 1918. He built a hospital, and practiced there until failing health forced him to retire, in 1934. At his death, on Labor Day of that year, he was survived by his wife and four children: Thomas D., of Richland, Washington; Gilbert, now living in Muscatine; Velma Denkman, of Durant; and Mildred Bieleberg, of Inglewood, California. Dr. Jacobs is best remembered for his love of all sports and for the help he never failed to give to young people. He was never too busy to listen sympathetically and with understanding, or to give good, sound, fatherly advice to those who needed it.

Dr. Fred Montz had been born on July 19, 1895, at Arlington, Iowa, had graduated from the S.U.I. College of Medicine in 1921, and had interned at St. Luke's Hospital, Cedar Rapids. He located in Lowden in 1922, and was married during that same year. Dr. and Mrs. Montz have one son, Dr. Charles R. Montz, who is practicing at Bismarck, North Dakota. Dr. Fred Montz is a member and a past-president of the Cedar County Medical Society. When he can find time, he enjoys fishing and reading.

Dr. F. H. Kisor located in Mechanicsville in 1924. He had graduated from S.U.I. in 1895, and had previously practiced at Kalona and at Cedar Rapids. He retired in 1949 after practicing medicine for 54 years, and he died in 1953 at the home of his daughter in Winter Haven, Florida.

Dr. Louis Edward Bees was born at Oxford Junction, Iowa, April 17, 1896. He graduated from Washington High School, Cedar Rapids, and after two years of pre-med and four years of medicine, graduated from S.U.I. in 1923. His undergraduate internship was at the state mental hospital in Cherokee, and his postgraduate internship was at Mercy Hospital, Davenport. He was a member of the S.U.I. band, the symphony orchestra, the men's glee club and the oratorio society. He had played the trombone and drums professionally in various dance bands, theatre orchestras, and Chatauqua bands, and had occasionally been a vocal soloist. His athletic interests have been in baseball, basketball and track. He served in World War I as a second lieutenant.

Dr. Bees located in Bennett in October, 1924, and has been there ever since. He has served as city health officer for Bennett and New Liberty since 1924. Besides music, his hobbies include pool, billiards, fishing, boating and swimming.

Dr. Harold Elmo O'Neal was born June 8, 1900, at Marshalltown, the youngest of the six children of R. N. and Orissa O'Neal. He graduated from high school in Yakima, Washington, and entered the University of Washington, in Seattle. He transferred to the University of Chicago to finish his pre-medical studies. After graduating from the medical school at Washington University, St. Louis, in 1927, he interned at the Missouri Pacific Railroad Hospital.

Dr. O'Neal practiced for three years in Nevada, Missouri, and then was the senior resident in orthopedic surgery at the University of Illinois Research Hospital before he came to Tipton on February 8, 1932. He has practiced there continuously since that time, with the exception of 56 months' service with the Armed Forces during World War II. As a lieutenant colonel, Dr. O'Neal served as battalion surgeon, 4th Army Division; surgeon, headquarters, 4th Army Division; division surgeon, 8th Army Division; commanding officer, 85th Evacuation Hospital; and commanding officer, Station Hospital, Herlong, California. He returned to Tipton following his discharge in October, 1945. He has been president of the Cedar County Medical Society for several years, and is a member of the Alpha Kappa Kappa medical fraternity.

Dr. O'Neal is chairman of the Cedar County Heart Committee and a member of the board of directors of the Iowa Heart Association. He is a member of the Tipton Masonic Lodge and of the Kaaba Temple, Davenport, and the Cedar County Shrine Club. Dr. O'Neal and Miss Elsie V. Maddox, of Sedalia, Missouri, were married on October 13, 1935. They have two children, Michael and Linda.

Dr. C. W. Sears practiced for one year in Mechanicsville. In 1935, he left for Youngstown, Ohio, and he later committed suicide.

Dr. Elmer Henry Littig was born in Iowa City on November 7, 1904, the son of Dr. Lawrence Littig, who was president of the Iowa State Medical Society in 1912. He received his M.D. degree from S.U.I. in 1930. He interned for two years at Fitzsimons General Hospital, Denver, and practiced in Platteville, Wisconsin, and in Iowa City before coming to Mechanicsville in 1935. He had married Miss Mary Plum, of Iowa City, in 1930. Their only child, Mary Alice, was born October 13, 1937, and is now a graduate of S.U.I. Dr. Littig is a staff member of Mercy Hospital and St. Luke's Methodist Hospital, Cedar Rapids, and has served as vice-president of the Mercy Hospital staff. In Mechanicsville, he is a member of the Lions Club, the Commercial Club, and the Masonic Lodge, and is health officer for the town.

Dr. John Edward Christiansen, born at Dixon, Iowa, November 30, 1912, had graduated from Davenport High School, and in 1936 from the S.U.I. College of Medicine. As an undergraduate at Iowa City he had lettered in baseball. In 1936 he had married Miss Florence Edgarda Castleman in Washington, Iowa. He interned at St. Luke's Hospital, Duluth, and started practice in Durant on July 5, 1937. Dr. and Mrs. Christiansen have four daughters, Ann Elizabeth, Mary Katherine, Susan Louise and Judith Marie, and two sons, John Edward and Thomas Charles.

Dr. Christiansen has been city physician at Durant since 1938, he has been a scoutmaster, is a member of the Cedar and Scott County Medical Societies, and is a member of the American Academy of General Practice. He is on the staffs of St. Luke's and Mercy Hospitals in Davenport, and is a member of the Episcopal Church.

There were several M.D.'s in Tipton briefly, just before and just after World War II. *Dr. A. G. Rice* came there in 1932 and practiced for several years before moving to Arizona, where he died of tuberculosis. *Dr. Merl Andrew Sampson Kadel,* born in 1901 and a 1933 medical graduate of S.U.I., is now employed at the Veterans Administration Hospital in Knoxville, Iowa. *Dr. Ralph M. Laugh-*

lin was born in 1909, graduated from S.U.I. in 1936, and is now practicing in Cedar Rapids.

Dr. Thaddeus Bozek, who was born in 1909 and graduated in medicine at the University of Nebraska in 1946, practiced for a time in West Branch, and is now in Iowa City.

Dr. Sanford Cook, the son of Mr. and Mrs. R. S. Cook, of Tipton, was born February 5, 1915. He graduated from S.U.I. in 1942, enlisted in the Army, interned in Duluth, and reported for duty in July, 1943. After his discharge from service, he returned to practice in Tipton. After a few years, he went back to Iowa City for a residency in radiology, and is now located at Beaver Dam, Wisconsin. Dr. Cook is married to the former Miss Doris Spicer, and they have one son.

Dr. Walter J. Kopsa, the son of Joseph and Anna Kopsa, was born April 22, 1922, at Cicero, Illinois. He received his B.S. and M.D. degrees from the University of Illinois, interned at Cook County Hospital, and after a year's residency at St. Luke's Hospital, Cedar Rapids, located in Tipton in 1949. He had married Miss Amelia Margaret Hayenga on September 26, 1945. The Kopsas have four children, Walter John, Joseph Erwin, Zeta Ann and Alicia Mary. Dr. Kopsa is a member of the United Presbyterian Church, a past-president of the Lions Club, president of the Tipton Library Board, a member of the Board of Education, the county coroner and a staff member of Mercy and St. Luke's Hospitals in Cedar Rapids.

Dr. Otto E. Kruse was born April 1, 1921, at Tomahawk, Wisconsin, and is the son of Mr. and Mrs. Carl W. Kruse, who now live in Lisbon, Iowa. He was a 1945 medical graduate of S.U.I., and after his internship at Milwaukee County Hospital, he served in the medical department of the Air Corps for two years. Then he had a year's general residency at St. Luke's, Cedar Rapids, before joining Dr. Kopsa in practice at Tipton, in 1949. He married Miss Verna E. Betts, of Cresco, on June 14 of that year. They have four sons, Craig, William, David and Mark.

Dr. Kruse is a member of the Trinity Lutheran Church, a trustee of the Iowa Lutheran Welfare Society, and a member of the Tipton City Council. With his family, he relaxes at gardening, woodworking and photography.

Dr. Lois Eichelberry practiced in West Branch during the years 1956-1958, while her husband was completing his medical work at S.U.I.

Dr. Richard G. Stuelke is a newcomer to the County, and his services are greatly appreciated by the community of West Branch. He was born January 17, 1933, in Des Moines, and he attended Creighton University and S.U.I., receiving his M.D. from the latter institution. After interning at Mercy Hospital, Cedar Rapids, he opened his office in West Branch on July 1, 1958. He does part-time research and teaching in the S.U.I. Anatomy Department. Dr. Stuelke belongs to the Lions Club, and is a stamp collector. Mrs. Stuelke is formerly from Council Bluffs. They have three small children.

FIVE WITH 50 YEARS' EXPERIENCE EACH

Dr. John E. Smith was born in Deep River, Iowa, in 1873. A graduate of Rush Medical College, he located in Clarence during September, 1900. Always interested in new medical developments, he installed an x-ray machine in his office as early as 1902. He purchased his first automobile the next year, and in return for the $1 license fee that he sent to Des Moines, he received plates bearing the number "11." He believes he must be the oldest continuous owner and operator of a motor vehicle in the state. He built two homes and moved into his present brick residence and office building in 1925.

In September, 1950, the community was happy to honor him with a celebration marking his completing 50 years of service there. Many of his "babies," ranging in age from two months to 49 years, led a parade from his home to the school gymnasium. After a potluck dinner and an exchange of reminiscences, a purse of $1,000 was presented to him as a token of appreciation and esteem. A few days prior to the community celebration, the Cedar County Medical Society had held a dinner in his honor and had presented him a gold-headed cane.

Dr. Paul G. Hoffman was born at Muscatine on December 7, 1876. He graduated from the S.U.I. medical school in 1905, interned for a year at



Dr. John E. Smith



Dr. Paul G. Hoffman

Mercy Hospital, Davenport, and in September, 1906, came to Tipton. When he rode in from Muscatine on horseback, he stopped at the livery barn, and in arranging to stable his animal, learned that the service would cost him $3 per week. He then went to the hotel to find quarters for himself, and was told that his expenses there would be $3 per week—the same for a man at the hotel as for his horse at the livery barn.

Dr. Hoffman formed a partnership with Dr. R. A. Nash that lasted for two years. Because Dr. Nash was in poor health and because it was necessary to make such trips on horseback, Dr. Hoffman made most of the country calls. After Dr. Nash's death, he carried on the practice alone. Like another doctor who has been sketched in this chronicle, Dr. Hoffman was included in the list of eligible bachelors that the editor of the TIPTON ADVERTISER presented in 1908 for the benefit of his women readers who might wish to take advantage of leap year: "P. G. Hoffman, a physician with an established business, dignified but kind, enjoys dancing and music, is particular about his meals, and applicants should know how to cook."

He married Miss Jessie Van Metre, who passed away about 20 years ago. One son was born to them, Paul, who is now with the Brown Printing Company, in Kansas City. Dr. Hoffman later married his first wife's sister, Mrs. Rena Van Metre Witmer. The Hoffmans enjoy traveling, and during the past several years have spent the winters in a warmer climate than Iowa affords. At present, Dr. Hoffman is intensely interested in the discussions and planning for the Senior Citizens of Iowa.

Dr. Louis J. Leech, born in Columbiana County, Ohio, on August 3, 1846, came to Iowa as a child and made his home in West Branch from then until his death. In January 1863, he enlisted in Co. B, 2nd Iowa Cavalry, and during the Civil War he engaged in the battles of Oxford, Franklin and Nashville. He was mustered out on October 15, 1865, at Talladega, Alabama. He married Miss Ruth Anna Whitacre on August 15, 1868, and they subsequently became the parents of two sons, now both deceased.

After the Civil War, he farmed for a few years and then entered S.U.I. He received his degree in 1882 and located in his home town, where he practiced for 55 years. He served on the school board for many years, and at different times was a member of the town council and mayor. A Republican, he served as representative in the 29th, 30th, and 31st General Assemblies of Iowa. He was chairman of the Committee on Public Health, and was author of the bill establishing a state bacteriology laboratory at S.U.I. He also took an active part in the establishment of the State Tuberculosis Sanitarium, at Oakvale.

Dr. Leech was very much interested in the preservation of Herbert Hoover's birthplace, in part at least because he had been the Hoovers' family physician. On his eighty-eighth birthday he was elected state commander of the G.A.R. A large crowd assembled under floodlights at the athletic field to pay tribute to him on his return home from that convention.

While attending the national G.A.R. encampment in Madison, Dr. Leech fell on the steps of the Wisconsin capitol building, September 6, 1937, fracturing his right knee. He died on September 23, at a hospital there, and his body was brought back to West Branch for burial.

Dr. Richard A. Peters was born November 11, 1863, at Anamosa, and he grew up there, along with his two brothers and one sister. As a child, he learned the ways of the pioneer. Before he was 12, the Indians whose camps he had known along the Wapsipinicon River, and the flocks of wild pigeons that circled the hills and clearings had gone. Young Richard went to a trade school in Anamosa, and took Latin at the Academy. After school, he helped the old family doctor in his little office on Main Street. At night, he pored over volumes from the small medical library in the office. At 17, he entered Rush Medical College, and when he graduated, in 1884, he was the youngest member of his class.

After graduation he came directly to Tipton, and stayed with the other young bachelors at the Fleming House. He and Miss Lillian Reichert were married on October 13, 1892 and they became the parents of two daughters, Pauline and

Marjorie. Dr. Peters died on December 11, 1938, at a Chicago hospital where he had been confined during a long illness.

Dr. Edward Joseph Van Metre was born in Benton County, Iowa, September 23, 1860, the second of the 11 children of Henry Clay Van Metre and his wife Rhoda. Edward taught school before entering Rush Medical College in 1884. After his graduation in 1886, he practiced for a year in Fairfax, Iowa, and then located in Tipton.

In the early years of his practice, Dr. Van Metre had to make calls on foot or by horse-drawn vehicle, so he maintained his own stables and always kept from four to six horses. He had some fast-stepping steeds, and sometimes found himself tumbled out into the snow when the drifts were really deep and the animals were in a hurry to reach their warm barn. As was usual with the early physicians, he compounded many of his own prescriptions.

Dr. Van Metre was elected president of the newly organized Cedar County Medical Fraternity in 1898. Also, he was head physician of the Court of Columbian Circles, and attended the meeting in 1904 at which the CCC merged with the Highland Nobles.

He served for many years as a Rock Island Railroad physician and on one memorable occassion received very special attention from his employer. In 1907, he was stricken with appendicitis, and arrangements were made for him to have an appendectomy in Cedar Rapids. He was to have been taken there on the Rock Island, but that plan was abandoned for fear of delay on account of a bad stretch of track near Plato. Finally, a special train was secured to travel over the Northwestern line and connect with the westbound midnight train at Stanwood. A number of the doctor's friends accompanied him at least part way, he reached Cedar Rapids without further difficulty, he was operated upon immediately upon his arrival at the hospital, and he survived.

Dr. Van Metre was a member of Cedar Lodge No. 11, A.F. & A.M. for over 50 years. He died on June 16, 1944, on his fifty-eighth wedding anniversary.

Please Mark Your Calendar

ISMS ANNUAL MEETING

April 23-26, 1961

Veterans Memorial Auditorium

Des Moines

THE VANISHING GENERAL PRACTITIONER

General practitioners are, perhaps, a more rapidly disappearing species than has been commonly supposed. Currently, according to the latest issue of Parke, Davis & Company's PATTERNS OF DISEASE, only one out of every three doctors of medicine is a generalist, whereas less than 30 years ago the ratio was two out of three.

Within a single generation, the numbers of specialists have increased 500 per cent, and the trend in that direction appears to be accelerating. Of physicians who graduated from medical school in 1930, about 30 per cent were in general practice five years later; of those who graduated in 1945, 26 per cent were general practitioners after five years; and of those who graduated in 1950, only 18 per cent were in general practice in 1955. A PATTERNS survey of third and fourth year medical students this year revealed that 67 per cent had already decided to specialize. Thirteen per cent intended to enter general practice, and the remaining 20 per cent were as yet undecided.

Internal medicine attracts more physicians than any other specialty, PATTERNS found. There is one internist among every six of the 62,783 diplomates in the nation. Second most numerous are the surgeons, with 8,047.

When did the specialists make their decisions to specialize? About one in 10 had made up his mind before entering medical school, the survey revealed; nearly three in 10 made their decision before graduating in medicine; four in 10 decided while serving their internships; and two in 10 came to their decisions after entering general practice.

Eighty-two per cent of the specialists surveyed said they like their work. As a group, ophthalmologists were most nearly unanimous (96 per cent) in saying they would choose the same type of practice if they were to start over again. Pediatricians were somewhat more disagreed, for only 68 per cent said they would choose pediatrics again. Four out of 10 general surgeons feel that their field is overcrowded, at least in their localities.

The average specialist puts in a 57-hour work week, and sees about 85 patients a week, but the case load varies with the specialty. Radiologists, for example, tend to have heavy case loads—32 per cent reported more than 200 per week. Anesthesiologists, psychiatrists and neurologists see fewer than the average. More than half the specialists in these fields had case loads of less than 50 patients a week.

How do patients come to specialists? The chief source of referrals are the specialist's other patients. About 40 per cent of patients are referred by other patients; 26 per cent by other specialists; and 22 per cent by general practitioners. The remaining 12 per cent, presumably, come entirely on their own initiative.

The survey indicated that three out of five specialists are in solo practice.

THE DOCTOR'S BUSINESS



Kintner Association? Beware!

HOWARD D. BAKER

WATERLOO

The so-called "Kintner associations" may eventually provide a means by which doctors can defer income taxes on money that they set aside for their retirement. As a matter of fact, two such groups of physicians were recently approved by the District Director of Internal Revenue at Springfield, Illinois. But Iowa physicians should take note that the District Director at Springfield is not the man with whom they must deal, and that the Washington office of the Bureau of Internal Revenue hasn't yet formulated its policy in this regard.

NOTHING CAN BE GAINED BY HURRYING

Immediately upon the Bureau's announcement of "proposed" regulations for Kintner-type associations, last January, there was a flurry of interest by a few brokers, insurance men and attorneys to "pioneer" in this field. Many partnerships were approached about starting such organizations in the hope of effecting dramatic tax savings. Basically, two courses of action were proposed:

(1) Set up an association, but delay starting a pension plan until regulations have been further clarified.

(2) Set up an association *and* a pension plan, on the probability that the pension plan will be approved.

Since these associations are expensive and time-consuming to initiate, we are taking a very firm stand against them at this time. There are numerous reasons for our position, and here are two of them:

(1) Once the Bureau has taken a final stand, it will be simple and quick, if advisable, to set up the organization, establish a pension plan and take advantage of all the possibilities of the association in one decisive step.

(2) Leading authorities in the pension field say that it is sheer suicide to establish an association *and* a pension plan without prior assurance of approval by the Bureau of Internal Revenue. Disapproval of the plan would lead to a complex and expensive procedure of liquidating the pension trust and reallocating the tax liability to the individual members of the group.

The further we delve into this situation, the more convinced we become that it is filled with complexities that are being vastly oversimplified by the people who are doing the most talking about it. What seems straightforward today may become a nightmare of legal red tape in the near future.

THE LATEST WORD FROM WASHINGTON

As recently as October 28, 1960, a "Technical Information Release" of the United States Treasury Department Internal Revenue Service said: "The United States Internal Revenue Service announced today that no determination letters, either favorable or adverse, will be issued with respect to the qualification under Section 401-A of the Code, of pension, annuity, profit sharing or stock bonus plans established by organized professional groups, until the regulations under Section 7701 of the Internal Revenue Code have been promulgated. These regulations will contain criteria to be used in testing, as to such professional groups, the existence of an association taxable as a corporation."

SUMMARY

We advise delaying action on the formation of associations until the Bureau has been specific in its requirements for such organizations and their pension plans. If you feel that this advice is too conservative and you want to explore this field, do so with a well-qualified team of attorneys and pension-trust men. This procedure will be expensive, but in this complex field your money will be well spent.

Mr. Baker is a partner in Professional Management Midwest, and manager of its Retirement Planning Department. He majored in accounting and business administration at S.U.I., and was an agent of the U. S. Bureau of Internal Revenue for 3½ years before forming his present association in 1953.

Woman's Auxiliary News

OUR PRESIDENT SAYS—

Our lives are influenced far more than we realize by those whom we meet day after day. Dr. Albert Schweitzer writes it stirs him to realize that so many people gave him something or were something to him. "Much that has become ours in gentleness, modesty, kindness, willingness to forgive, in veracity, loyalty, resignation under suffering, we owe to people in whom we have seen or experienced these virtues at work, sometimes in a great manner, sometimes in a small." There are many opportunities for us to enrich the lives of others. Those who are active in the Auxiliary are enriching their own lives in this constant eagerness to enrich the lives of others.

It was an inspiration to meet other doctors' wives at the Chicago conference. If the qualities those people possess will brush off on those with whom they associate, how thankful we are that we were there. That Conference has been highlighted in a separate article in the WOMAN'S AUXILIARY NEWS.

The members of the Black Hawk County Auxiliary were hostesses to doctors and their wives from all over the state on October 20. This was a fun day. More than this, it was an informative day. Every couple who attended it thought they came as two people. After listening to Dr. Missildine, we knew each couple consisted actually of four people! The little boy and the little girl they were as they grew up came along too. In fact, their parents were there too. In the evening, the six of them danced together. I could scarcely believe that so many parents like to "jitterbug"! Any questions?

The vast majority gained much more knowledge than did your president who was busy attending to coffees, to the visiting, and to the luncheon, fashion show, dinner and dance. Anyone who was there will tell a new story of what you missed. It was excellent! Our sincere thanks to all those who made it such an outstanding event.

"Christmas
Is not a time or a season,
But a state of mind.
To cherish peace and good will,
To be plenteous in mercy,
Is to have the real spirit of
Christmas.
If we think on these things,
There will be born in us
A Savior.
And over us will shine
A star
Sending its gleam
Of hope to the world."

Calvin Coolidge

This is a busy, exciting, family-centered, church-going, program-seeing, spiritually stimulating time of year. The only thing of interest to feature in a read-from-beginning-to-end President's column is:

SEASONS GREETINGS

—MRS. R. F. NIELSEN
President

BOARD MEETING HIGHLIGHTS

Date: October 25
Speaker: Mr. Donald Taylor
Chief Pilot: Hazel Lammey
Present: Nineteen Board Members
Weather: Rain, fog and sunshine
Business: Accepted resignation of Mrs. Atkinson as 2nd Vice President (So Sorry Armene!)
Will support medical society program to interest high school students in medical careers
Will assist in Essay Contest on Free Enterprise
Will send supplies to leprosy colony in Thailand
Accepted organization report of special committee
Reports from county presidents
Councilor reports
Reports from committee chairmen:

- Mrs. Louis Goldberg (Annual Meeting) outlined plans and asks for suggestions from members.
- Mrs. W. W. Sands (Auxiliary News)
- Mrs. S. P. Leinbach (Civil Defense) presented a 12-minute skit which can be used for Auxiliary programs. Write her, if you are interested.
- Mrs. E. B. Dawson (Community Service) Select a nominee for woman-of-the-year award in YOUR county. She may win at the state level too!

Materials for Essay Contest will be forwarded to counties.

Mrs. E. A. Vorisek (Finance)

Mrs. W. C. Shinkle (Health Careers)—Future Nurses Clubs conference plans for November 4 in Fort Dodge.

Mrs. H. W. Smith (Health Educational Loan Fund)—Eleven loans granted this year.

Mrs. H. G. Ellis (Legislative) outlined the past year's program as carried out. Urged continued interest and support of legislation for health measures and better community life.

Mrs. E. A. Larsen (Mental Health) stressed need for each county's taking an active interest in its local situation, and particularly in its nursing homes.

Mrs. R. E. Hines (Safety)—Automotive safety and the SWAT program.

DISTRICT MEETINGS

District I

A luncheon meeting of physicians' wives in District I was held at the Hotel Winneshiek, in Decorah, on October 12. Members and guests from Allamakee, Fayette and Winneshiek counties were present. Mrs. R. F. Nielsen, president of the Woman's Auxiliary to the Iowa State Medical Society, and Mrs. Hazel Lammey, administrative secretary were in attendance. They presented the new organizational plan and outlined the Auxiliary's program and the projects in which county chapters may participate. Mrs. M. F. Kiesau, the district councilor who made the arrangements, presided at this meeting.

District VI

The Marshall County Medical Auxiliary entertained the members of District VI at the Marshalltown Community Center on Tuesday morning, October 11. The meeting was preceded by a coffee hour. In addition to the members of the Marshall County Auxiliary, some members from Conrad, Waterloo and Cedar Falls attended. The following from the State Auxiliary were present: Mrs. R. F. Nielsen, president; Mrs. B. F. Kilgore, president-elect; Mrs. R. E. Hines, Safety chairman; Mrs. J. F. Gerken, Sixth District councilor; and Mrs. Hazel Lammey, administrative secretary. All phases of Auxiliary work were taken up and through the discussion a much clearer picture of the desired activity was gained. Members who attended felt this was a morning well spent, and urge other Auxiliaries to attend district meetings in their areas.

—MRS. J. GARLAND

District VII

Mrs. N. L. Hersey, the councilor, presided at the luncheon meeting on October 27 at the Pinicon Hotel in Independence. Nearly 100 per cent of the members of the newly organized Buchanan County Auxiliary were in attendance, as were a number of Delaware County members. Representatives from the Dubuque Auxiliary had planned to attend, but were unable to be present and sent greetings. A social hour preceding the luncheon afforded all of those who came an opportunity to become better acquainted, which is one of the important phases of our working together. A discussion of various projects and the new organizational program followed the presentation of the work the Auxiliary is accomplishing. Mrs. R. F. Nielsen, state president, Mrs. L. J. Henderson, state secretary, and Mrs. Hazel Lammey, the administrative secretary, attended this meeting. The enthusiasm of the Buchanan County Auxiliary members and their plans for participation in Auxiliary activities were some of the highlights of the day. The tables were beautifully decorated with fall flower arrangements, and a gift from a local canning company was presented to each one present.

District VIII

A meeting of the Woman's Auxiliary to the Iowa State Medical Society of southeastern Iowa was held November 1 at the Burlington Country Club, Burlington. There was a social hour and then a luncheon preceding the formal meeting. Mrs. R. F. Nielsen, the state president was presented with a corsage at the luncheon. The decorations on the luncheon table were in keeping with the season, and had been made by Mrs. E. P. Russell, an Auxiliary member from Burlington.

Following the luncheon, Mrs. A. C. Richmond, president of the North Lee County Auxiliary, presided in the absence of Mrs. G. J. McMillan who was vacationing in Europe. Mrs. Richmond opened the meeting and introduced Mrs. Nielsen, who spoke about the state organization and its projects. She presented maps illustrating the new organizational plan recently adopted for more thorough coverage of the state. She introduced Mrs. Hazel Lammey, the administrative secretary of the State Auxiliary, who spoke briefly and informally, answering many questions and seeming to have a never ending source of information.

Great credit should be given to the Burlington committee, as well as to Mrs. J. L. Saar, Jr., the president, and Mrs. Joseph Stoikovic, vice-president, for assisting Mrs. Richmond in arranging for this meeting.

The event certainly shows how times have changed from the time when the woman's part in the "gentle art of healing" consisted of holding a restless hand, stroking a fevered brow or holding a cooling drink. Hurrah for the doctors' wives of Iowa! And God bless them!

—SARAH JOHNSON CASEY

COUNTY AUXILIARIES

Mahaska

Mrs. Joseph Lederman, president of the Mahaska Auxiliary, presided at the regular luncheon meeting at 1:00 P.M. Tuesday, November 15, at the Downing Hotel in Oskaloosa. Mrs. Lawrence Grahek was welcomed as a new member. It was decided that the Auxiliary would cosponsor the Oskaloosa Future Nurses Clubs with the Mahaska County Nurses Association. Plans were also made for the Christmas remembrance for a needy family. A lively auction of $3.00 gifts purchased on summer vacation trips afforded an interesting program and also put some money into the treasury.

Mrs. Kenneth Lemon accepted the presidency, effective upon the departure of the president, Mrs. Lederman. Mrs. Grahek was named the new historian and press and publicity chairman.

SAMA WIVES

(Johnson County)

This is a newly organized group sponsored by the Woman's Auxiliary to the Iowa State Medical Society and the interest and enthusiasm with which its members look forward to their new role in life is expressed in the following quotes from President Anne Hesse's greetings in the organization's first Newsletter issued November 3. She refers to the members' opportunity to participate in one of the great "firsts" taking place on the campus of SUI College of Medicine.

"It is the purpose of this organization to be purely educational, helping us to understand more fully the problems and responsibilities involved in being a physician's wife. We not only hope to broaden our grasp of the scope of the medical profession, but also to render services beneficial to the medical college and the medical student.

"As wives of medical students, we must realize that we may become the greatest help—or hindrance—to our husbands in their chosen profession. Association with SUI SAMA Wives will provide you with the opportunity to become more well-informed and better able to communicate a positive mental picture to the lay person of the doctor's wife today.

"To quote our organization's sponsor, Mrs. A. E. Braley: 'This organization has all the possibilities of fulfilling a long-felt need within the community of SUI medical-student wives.'"

The SUI SAMA Wives' calendar of events is set up now for the entire school year. The first meeting on November 8 was a panel program of doctors and their wives with "a discussion of interest to any future 'Mrs. M.D.'"

The Project Committee has chalked up as two of the "firsts" in the new group's accomplishments its book sale conducted the first week of medical school, which netted $102, and its rummage sale October 29, which added $98 more to the treasury. These two projects will be a big help in financing of the organization's medical-student loan fund.

The SAMA Wives' big event, a pancake-sausage supper, will be reported in the January AUXILIARY NEWS. The proceeds from this project will also be added to the planned loan fund. A Christmas charity project is also on the agenda.

FUTURE NURSES CLUBS CONVENTION

The Fort Dodge Future Nurses Club and the Webster County Medical Auxiliary acted as hostesses for the one-day meeting of Iowa Clubs. One hundred seventeen delegates from 20 FNC's attended the tenth annual convention to learn more about nursing as a career. The clubs represented were those at Boone, Grundy Center, Osage, Spencer, Eagle Grove, Harlan, Britt, Webster City, Ankeny, LeMars, Humboldt and seven high schools in the Greater Des Moines area.

The morning program at Mercy Hospital opened with roll call of clubs, a representative from each organization giving a short sketch of her club. Mrs. D. S. Egbert, president of the Webster County Medical Auxiliary, welcomed the visiting delegates to Fort Dodge, and Sister Mary Eulalia, R.S.M., Mercy Hospital administrator, welcomed them to the hospital.

Mrs. W. C. Shinkle, of Des Moines, state chairman of the Health Careers Committee, was an honored guest, and gave the "future nurses" some helpful hints.

Don G. Bock, M.D., president of the Webster County Medical Society, extended a greeting to the visiting delegates, after which Mr. Carl T. Feelhaver, superintendent of the Fort Dodge public schools, outlined the proposed nursing program for the Community College.

The Future Nurses Club of Fort Dodge Senior High School had just received a national charter from the National League for Nursing. The charter was formally accepted by Kay White and Beverly Frietsch of the Fort Dodge FNC during the morning program. The morning session closed with a talk by Miss Anne Taylor, dean of the school of nursing at the University of South Dakota.

The group divided for luncheon, with half remaining at Mercy Hospital and the other half going to Lutheran Hospital. Tours of both hospitals followed luncheon, after which the visiting delegates were entertained at a coke party presented through the courtesy of the Webster County Medical Association.

Mrs. E. B. Dawson, state community service

chairman, was master of ceremonies for the convention.

THE LAST WORD IN CIVIL DEFENSE!

Here it is—the most up-to-the-minute help I can possibly bring you on Civil Defense both in important information and in program helps.

How is *your* Civil Defense I. Q.?

1. Do you know that this whole international struggle for nuclear power is based on a system called "Mutual Deterrence," with the aim of being strong enough in missile defense so that no nation will dare attack?

2. Do you know that Russia is presently *greatly* strengthening its Civil Defense program so that the U.S.S.R. will be able to survive any nuclear attack and strike back in retaliation?

3. Do you know that a break-through in the "Mutual Deterrence" system, convincing any one nation that it has the dominant nuclear power, would be called the "Balance of Terror?"

4. Do you know that some of our military experts feel that *if* our nation were prepared with adequate home and industrial shelters, we could sustain a loss of from 20 to 40 million people and still survive and be strong enough to retaliate? Are *you* and *your home* ready?

5. Do you know that the Midwest would be the *first* target for any attack directed over the Arctic Circle?

6. Do you know that there are thought to be *eight* target cities in Iowa? Des Moines, Sioux City, Davenport, Cedar Rapids, Council Bluffs, Clinton, Dubuque, and Waterloo. How close are you to any of these? *Too* close?

7. Do you know how to set up a "Grandma's Pantry?" The Office of Civil and Defense Mobilization tells you how:

To estimate how much food you should buy for your family's 2-week home food storage, multiply the number of people in your household by the amounts listed below. Amounts listed below are for one person for two weeks. If the children are young, the amounts can be decreased by one-fourth. If the children are infants, canned baby foods should be substituted for some of the other canned foods. Be sure to plan for old people or invalids.

CHECK "PANTRY" AT LEAST ONCE A MONTH, PREFERABLY MORE OFTEN, AND ROTATE REGULARLY.

BOTTLED WATER MUST BE CHANGED EVERY 6 WEEKS.

MILK: Powdered nonfat dry, 2 pkgs.; evaporated, 4 (14½-oz.) cans.

JUICES: Tomato, 2 (1-qt. 14-oz.) cans; Orange, 2 (1-qt. 14-oz.) cans; grapefruit, 2 (1-qt. 14-oz.) cans.

FRUITS: Peaches, 2 (1-lb. 14-oz.) cans; Pears, 2 (1-lb. 14-oz.) cans; Dried prunes or apricots, 2 lbs.

VEGETABLES: Tomatoes, 4 (16-oz.) cans; Peas, 4 (16-17-oz.) cans; Corn, 2 (12-16½-oz.) cans; Green beans, 2 (15½-oz.) cans.

SOUPS: Assorted, 8 (10½-oz.) cans.

MEATS AND MEAT SUBSTITUTES: Beef stew, 2 (1-lb.) cans; Salmon, 2 (1-lb.) cans or Tuna, 4 (6-7-oz.) cans; Spaghetti and meat balls, 2 (15½-oz.) cans; Baked beans, 2 (1-lb.) cans; Cheese, 2 jars; Peanut butter, 2 jars.

CERALS: Ready-to-eat, 14 (individual-serving pkgs.).

CRACKERS-COOKIES: 2 boxes.

BEVERAGES: Instant coffee, 2 (2-oz.) jars or instant tea, 2 (1-oz.) jars or instant cocoa, 2 (1-lb.) pkgs.

SOFT DRINKS: 24 bottles.

HERE ARE OTHER ESSENTIAL SUPPLIES

Water in jugs or bottles, salt, sugar.

Matches, fuel, cooking utensils, can opener, tableware and utensils, paper supplies, old newspapers.

Portable radio, flashlight, candles and holders, first-aid kit, blankets, pail, garbage container.

The Bible or other family religious requirements.

Games and amusements for the children.

Optional supplies: Candy, gum, tobacco.

A Civil Defense skit, *Operation Home Preparedness,* previewed by your State Board, will soon be ready for you!

At your Auxiliary's State Board Meeting in October, a skit *Operation Home Preparedness,* given so successfully at the national convention last summer, was cast and given on-the-spot. Some call this kind of impromptu acting, "a walking rehearsal." There are only three characters in the skit, and no stage props are required. It is an excellent antidote for apathy and was considered to be so informative on Civil Defense that your Board recommended that a copy should be made available for each Auxiliary, and will be mailed very soon. Members-at-large send your requests for copies to the Central Office. I urge each Auxiliary to present the skit *as soon as possible* at one of your regular meetings.

A parting thought: Being informed on Civil Defense *may* be your ticket to survival. It's as simple as that.

—MILDRED LEINBACH (MRS. S. P.)
Civil Defense Chairman

WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

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THE JOURNAL

of the

Iowa State Medical Society

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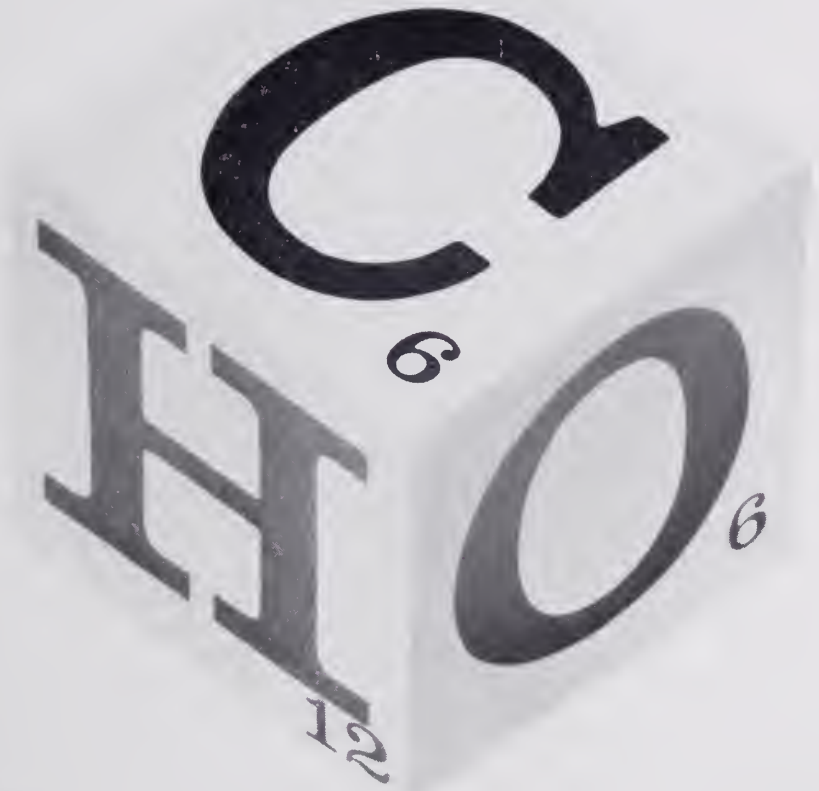
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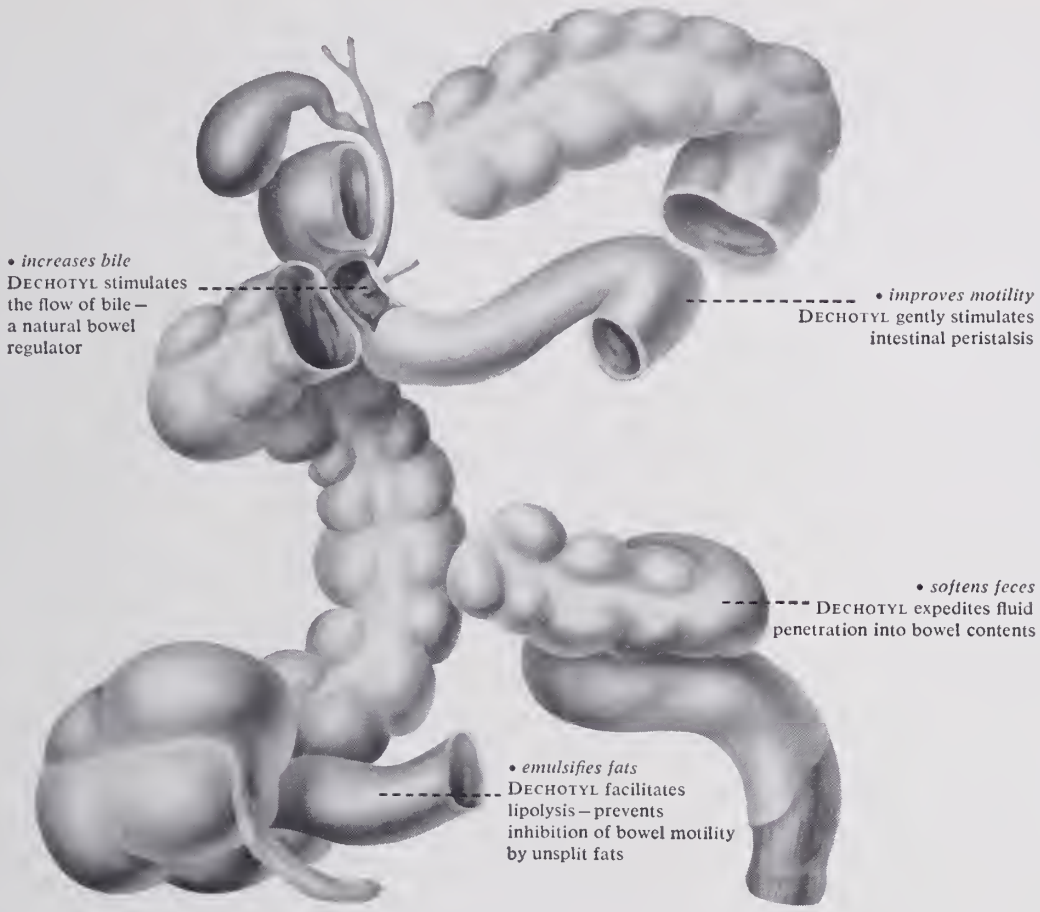
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